

MEETING  
STATE OF CALIFORNIA  
AIR RESOURCES BOARD

CALEPA HEADQUARTERS  
BYRON SHER AUDITORIUM  
SECOND FLOOR  
1001 I STREET  
SACRAMENTO, CALIFORNIA

FRIDAY, SEPTEMBER 28, 2018

8:42 A.M.

JAMES F. PETERS, CSR  
CERTIFIED SHORTHAND REPORTER  
LICENSE NUMBER 10063

A P P E A R A N C E S

BOARD MEMBERS:

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Hector De La Torre

Senator Dean Florez

Assembly Member Eduardo Garcia

Supervisor John Gioia

Senator Ricardo Lara

Ms. Judy Mitchell

Supervisor Ron Roberts

Dr. Alex Sherriffs

Professor Dan Sperling

Ms. Diane Takvorian

STAFF:

Mr. Richard Corey, Executive Officer

Ms. Edie Chang, Deputy Executive Officer

Mr. Steve Cliff, Deputy Executive Officer

Mr. Kurt Karperos, Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Ms. La Ronda Bowen, Ombudsman

Ms. Emily Wimberger, Chief Economist

Ms. Veronica Eady, Assistant Executive Officer

A P P E A R A N C E S C O N T I N U E D

STAFF:

Ms. Shirin Barfjani, Air Pollution Specialist, Zero Emission Truck and Bus Section, Mobile Source Control Division(MSCD)

Ms. Analisa Bevan, Assistant Division Chief, Emissions Compliance, Automotive Regulations and Science Division(ECARS)

Mr. Tony Brasil, Chief, Transportation and Clean Technology Branch, MSCD

Mr. Pippin Brehler, Senior Attorney, Legal Office

Mr. Mike Carter, Assistant Division Chief, MSCD

Ms. Sara Carter, Staff Air Pollution Specialist, Advance Clean Cars Regulations Section, Advanced Clean Cars Branch, ECARS

Ms. Yachun Chow, Manager, Zero Emission Truck and Bus Section, MSCD

Mr. Joshua Cunningham, Branch Chief, Advanced Clean Cars Branch, ECARS

Ms. Anna Hebert, Division Chief, ECARS

Mr. Jack Kitowski, Division Chief, MSCD

Mr. Mike McCarthy, Chief Technology Officer, ECARS

ALSO PRESENT:

Mr. Alan Abbs, California Air Pollution Control Officers Association

Mr. Eddie Ahn, Brightline Defense

Mr. Don Anair, Union of Concerned Scientists

Mr. Will Barrett, American Lung Association

Mr. Doran Barnes, Foothill Transit

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Ms. Abhilasha Bhola, Jobs to Move America

Mr. Robert Bienenfeld, American Honda Motor Company, Inc.

Mr. Nico Bouwkamp, California Fuel Cell Partnership

Dr. Rasto Brezny, Manufacturers of Emission Controls Association

Mr. Todd Campbell, Clean Energy

Mr. David Clark, International Brotherhood of Electrical Workers, Loca 100

Mr. Stewart Clark, Washington Air Quality Program

Mr. Derek Cole, International Brotherhood of Electrical Workers, Local 302

Mr. Carlo De La Cruz, Sierra Club, L.A. Bus Coalition

Mr. Steven Douglas, Alliance of Automobile Manufacturers, Inc.

Ms. Kristin, Essner, Orange County Transportation Authority

Ms. Leah Feldon, Oregon Department of Environmental Quality

Ms. Tiffani Fink, Paratransit

Ms. Irene Gutierrez, Natural Resources Defense Council

Ms. Heidi Hales, Vermont Department of Environmental Conservation

Mr. Anthony Harrison, ChargePoint

Dr. Mark Horton

Mr. Paul Jablonski, San Diego Metropolitan Transit System

Mr. Dan Jacobson, Environment California

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Ms. Karen Jacques, Sacramento Transit Advocates and Riders

Ms. Nina Kapoor, Coalition for Renewable Natural Gas

Mr. Ryan Kenny, Clean Energy

Mr. Bhavin Khatri, San Francisco Municipal Transportation Agency

Ms. Kathy Kinsey, NESCAUM

Ms. Christine Kirby, Massachusetts Department of Environmental Protection

Mr. Robert Klee, Connecticut Department of Energy and Environmental Protection

Mr. Brian Kolodji, Black Swan

Ms. Jennifer Kropke, International Brotherhood of Electrical Workers

Mr. Thomas Lawson, California Natural Gas Vehicle Coalition

Mr. Kent Leacock, Proterra

Mr. Rudy LeFlore, Sunline Transit

Mr. Jaimie Levin, Center for Transportation and the Environment

Mr. Mark Lonergan, Sacramento Regional Transit

Mr. Bill Magavern, Coalition for Clean Air

Mr. Kevin Maggay, SoCalGas

Ms. Deborah Mans, New Jersey Department of Environmental Protection

Mr. Steven McCauley, SMART Union

Mr. John McEntagart, International Brotherhood of Electrical Workers, Local 551

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Ms. Lisa McGhee, San Diego Airport Parking  
Mr. Christopher Miller, Advanced Engines Systems Institute  
Ms. Jacklyn Montgomery, CalAct  
Ms. Urvi Nagrani, Motiv Power Systems  
Mr. Robert Naylor, Los Angeles County Metro  
Mr. Graham Noyes, Pearson Fuels  
Mr. Keith Nunn, Golden Gate Transit  
Mr. Jimmy O'Dea, Union of Concerned Scientists  
Mr. Ernesto Pacheco, Communication Workers of America'  
Ms. Kathryn Phillips, Sierra Club  
Mr. Ray Pingle, Sierra Club California  
Mr. Rick Ramacier, County Connection  
Mr. Sanjay Ranchod, Tesla  
Ms. Julia Rege, Global Automakers  
Ms. Laura Renger, Southern California Edison  
Ms. Emily Rusch, CALPIRG  
Mr. Tim Sasseen, Ballard  
Mr. David Sawaya, Pacific Gas and Electric  
Mr. Ryan Schuchard, CALSTART  
Mr. Edgar Seda, SMART Union  
Mr. Carl Sedoryk, Monterey-Salinas Transit  
Mr. Nick Segura, International Brotherhood of Electrical  
Workers, Local 569

A P P E A R A N C E S C O N T I N U E D

ALSO PRESENT:

Ms. Estee Sepulveda, AC Transit

Mr. Joshua Shaw, California Transit Association

Mr. Jared Snyder, New York State Department of  
Environmental Conservation

Ms. Silvia Solis, Santa Cruz Metropolitan Transit District

Mr. JB Tengco, Blue Green Alliance

Mr. Glen Tepke, Metropolitan Transportation Commission

Ms. Eileen Tutt, California Electric Transportation  
Coalition

Mr. Emmanuel Wagner, California Hydrogen Business Council

Mr. David Warren, New Flyer of America

Ms. Rikki Weber, Earthjustice

Mr. Dave Weiskopf, NextGen

Mr. Jim Wilson, Humboldt Transit Authority

Mr. Vincent Wiraatmadja, BYD Motors

Mr. Peter Zalzal, Environmental Defense Fund

Mr. Bill Zobel, Trillium

I N D E X

	PAGE
Call to Order	1
Pledge of Allegiance	1
Roll Call	2
Opening Remarks by Chair Nichols	3
Item 18-7-5	
Chair Nichols	4
Executive Officer Corey	6
Staff Presentation	8
Mr. Klee	23
Ms. Kirby	29
Ms. Mans	34
Mr. Snyder	37
Ms. Feldon	41
Ms. Hales	44
Mr. Clark	48
Board Discussion and Q&A	51
Mr. Schuchard	56
Dr. Brezny	57
Mr. Douglas	59
Ms. Rege	61
Mr. Zalzal	64
Ms. Gutierrez	66
Mr. Anair	68
Ms. Kinsey	69
Mr. Noyes	71
Mr. Bienenfeld	75
Mr. Miller	76
Mr. Barrett	79
Mr. Ranchod	80
Ms. McGhee	82
Mr. Magavern	85
Mr. Kolodji	87
Mr. Weiskopf	88
Board Discussion and Q&A	89
Motion	97
Board Discussion and Q&A	97
Vote	108
Item 18-7-6	
Chair Nichols	109
Executive Officer Corey	111
Staff Presentation	113

I N D E X   C O N T I N U E D

	PAGE
Item 18-7-6 (continued)	
Mr. Leacock	130
Ms. Nagrani	131
Mr. Abbs	133
Mr. Warren	135
Mr. Wagner	138
Mr. Tepke	139
Ms. Renger	141
Mr. Schuchard	143
Mr. McEntagart	145
Mr. Clark	146
Ms. Kropke	147
Mr. Cole	148
Mr. Segura	148
Mr. Naylor	150
Mr. Khatri	151
Mr. Sasseen	154
Mr. Bouwkamp	157
Mr. Barrett	158
Dr. Horton	160
Mr. O'Dea	161
Ms. Essner	162
Mr. Magavern	164
Mr. Harrison	166
Mr. Seda	168
Mr. Lonergan	168
Mr. McCauley	171
Ms. Weber	171
Ms. Bhola	173
Mr. Pacheco	175
Mr. Tengco	178
Mr. LeFlore	180
Mr. Maggay	182
Mr. Campbell	185
Mr. Jacobson	187
Ms. Rusch	189
Mr. Lawson	190
Mr. Jablonski	191
Mr. Nunn	194
Ms. Solis	196
Mr. Shaw	198
Mr. Barnes	201
Ms. Sepulveda	203
Mr. Sedoryk	206
Ms. Montgomery	208
Ms. Fink	210

I N D E X C O N T I N U E D

	PAGE
Item 18-7-6(continued)	
Mr. Wilson	211
Mr. Ramacier	212
Mr. Wiraatmadja	214
Ms. Jacques	215
Ms. Tutt	216
Mr. Levin	217
Ms. McGhee	218
Mr. Zobel	220
Mr. Ahn	222
Ms. Kapoor	223
Mr. Sawaya	225
Mr. De La Cruz	227
Mr. Pingle	228
Ms. Phillips	230
Mr. Kenny	231
Board Discussion and Q&A	232
Public Comment	273
Adjournment	277
Reporter's Certificate	278

## P R O C E E D I N G S

CHAIR NICHOLS: Sounds system working?

Yes, it's all good.

This is a historic day for the Air Resources Board. I have functioned as the Chair of this Board for a long time now without ever having used a gavel.

(Laughter.)

CHAIR NICHOLS: I've been able to compel the audience through the use of my voice and personality to do what I wanted them to do when it came to sitting down. But yesterday, I failed and so I was provided with a gavel, and the power has gone to my head.

(Laughter.)

CHAIR NICHOLS: I really like that.

(Laughter.)

CHAIR NICHOLS: I know, it's not a very good looking gavel, but, you know, we can work on that. Good morning, everybody, and welcome to the September 28th public meeting of the California Air Resources Board. Before we take the role and get started, we begin our Board meetings with the Pledge of Allegiance to the flag.

So please stand and join me.

(Thereupon the Pledge of Allegiance was recited in unison.)

CHAIR NICHOLS: Madam Clerk, would you please

1 call the roll.

2 BOARD CLERK DAVIS: Dr. Balmes?

3 BOARD MEMBER BALMES: Here.

4 BOARD CLERK DAVIS: Mr. De La Torre?

5 Senator Florez?

6 BOARD MEMBER FLOREZ: Here.

7 BOARD CLERK DAVIS: Assembly Member Garcia?

8 Supervisor Gioia?

9 BOARD MEMBER GIOIA: Here.

10 BOARD CLERK DAVIS: Senator Lara?

11 Ms. Mitchell?

12 BOARD MEMBER MITCHELL: Here.

13 BOARD CLERK DAVIS: Ms. Riordan?

14 Supervisor Roberts?

15 BOARD MEMBER ROBERTS: Here.

16 BOARD CLERK DAVIS: Supervisor Serna?

17 Dr. Sherriffs?

18 BOARD MEMBER SHERRIFFS: Here.

19 BOARD CLERK DAVIS: Professor Sperling?

20 BOARD MEMBER SPERLING: Here.

21 BOARD CLERK DAVIS: Ms. Takvorian?

22 BOARD MEMBER TAKVORIAN: Here.

23 BOARD CLERK DAVIS: Vice Chair Berg?

24 VICE CHAIR BERG: Here.

25 BOARD CLERK DAVIS: Chair Nichols?

1 CHAIR NICHOLS: Here.

2 BOARD CLERK DAVIS: Madam Chair, we have a  
3 quorum.

4 CHAIR NICHOLS: Thank you. Just a couple of  
5 announcements before we get started. First of all, we  
6 have interpretation services provided today in Spanish for  
7 Item 18-7-6, the proposed innovative clean transit  
8 regulation, a replacement of the fleet rule for transit  
9 agencies. Headsets are available outside the hearing room  
10 at the attendance sign-up table and can be picked up at  
11 any time.

12 (Thereupon the interpreter translated  
13 in Spanish.)

14 CHAIR NICHOLS: Thank you.

15 For safety reasons, I ask everybody to note that  
16 the emergency exits are at the rear of the room, as well  
17 as to either side of the stage here. And in the event of  
18 a fire alarm, we're required to evacuate this room  
19 immediately, go down the stairs, and be out of the  
20 building until the all-clear signal is given, and then we  
21 can return and resume the hearing.

22 Anyone who wishes to testify should fill out a  
23 request to speak card. They've available also in the  
24 lobby outside the Board room. Please turn it into a Board  
25 assistant or the Clerk of the Board seated over here at

1 this table prior to the commencement of the item. And we  
2 remind speakers that the Board will impose a three-minute  
3 time limit on individual testimony. Please tell us your  
4 name -- first and last name when you come up to the  
5 podium, and then put your testimony in your own words.  
6 Anyone who needs the services of the translator can find  
7 her also down in the front. You don't need to read your  
8 written submission, because that will be entered into the  
9 record.

10           So the first item on our agenda today is  
11 considering amendments to the Low Emission Vehicle III,  
12 LEV III greenhouse gas emissions regulation. California's  
13 LEV III greenhouse gas emissions regulation for light-duty  
14 vehicles is a fundamental component of our State strategy  
15 for achieving our climate change goals. Recognizing the  
16 value of a national vehicle program, we've worked with the  
17 U.S. Environmental Protection Agency and the National  
18 Highway Traffic Safety Administration, or NHTSA, to  
19 develop greenhouse gas standards that meet the needs both  
20 of California and the nation as a whole.

21           The success of this joint effort has enabled  
22 California to participate in a national program for  
23 reducing light-duty vehicle greenhouse gas emissions since  
24 model year 2012. This has been accomplished by the  
25 addition of some regulatory flexibility to the LEV III

1 program that allows automakers to certify vehicles that  
2 are sold in California with the federal greenhouse gas  
3 standards as an alternative to our own standards.

4 This flexibility was approved by the Board  
5 because the federal standards as of that time would  
6 deliver equivalent greenhouse gas emissions reductions to  
7 the California standards.

8 At the end of August, U.S. EPA and NHTSA  
9 published a proposal to significantly reduce the  
10 stringency of the federal standards from model year 2021  
11 through 2026. As we have explained before and will do so  
12 again in this discussion, the federal proposal is contrary  
13 to the law that directs the federal agencies to protect  
14 the public health and welfare.

15 To the evidence that shows the current standards  
16 are feasible and cost effective and also contrary to the  
17 direction of innovation, and even to industries' own  
18 public statements of support for increasingly stringent  
19 standards.

20 Consequently, today's proposal is intended to  
21 serve as a backstop and preserve the emissions benefits of  
22 California's standards by clarifying that the compliance  
23 option is not available if U.S. EPA follows through with  
24 its proposed relaxation of its greenhouse gas emissions  
25 standards. Before we start this item, I want to highlight

1 another element of this notice of proposed rulemaking that  
2 was jointly issued by U.S. EPA and NHTSA.

3           The NPRM, as it's called, has a proposal  
4 specifically to find that California's greenhouse gas  
5 emissions regulation and our zero-emission vehicle  
6 regulation are preempted by federal law and to withdraw  
7 the waiver to enforce these regulations that was granted  
8 to California by U.S. EPA in 2013. This action is also  
9 contrary both to the law and to the facts.

10           California intends to vigorously defend our right  
11 to adopt and enforce these regulations including in court  
12 if need be.

13           With that introduction, I'll ask Mr. Corey to  
14 please introduce this item.

15           EXECUTIVE OFFICER COREY: Yes. Thanks, Chair  
16 Nichols.

17           As you noted, when the Board approved the  
18 deem-to-comply option the allows compliance with federal  
19 light-duty greenhouse gas standards as compliance with LEV  
20 III standards, you directed staff to participate in a  
21 federal mid-term evaluation of these standards. The  
22 mid-term evaluation was designed to reassess the  
23 appropriateness of the federal standards for model years  
24 2022 through 2025.

25           The Board also directed staff to evaluate the

1 appropriateness of the LEV III greenhouse gas emission  
2 standards for the same model years as part of the  
3 California focused mid-term review. On January 13th,  
4 2017, U.S. EPA released its final determination to  
5 maintain the current federal greenhouse gas emission  
6 standards at their current stringency level.

7 Two months later, staff presented to the Board the  
8 conclusion from California's mid-term review, which agreed  
9 with the U.S. EPAs' findings. Given that staff's findings  
10 agreed with those of U.S. EPA, the Board concluded that it  
11 was appropriate to continue California's participation in  
12 the national program.

13 However, with the change of federal  
14 administration, the U.S. EPA revised its final  
15 determination to conclude that the federal standards were  
16 inappropriate despite the extensive technical analysis and  
17 robust record on which they were based.

18 In contrast to the previous approach, the current  
19 federal administration did not include CARB in the  
20 development of the revised determination. And as you  
21 noted, last month, U.S. EPA and NHTSA published a notice  
22 of proposed rulemaking that will, if finalized as is,  
23 profoundly weaken the federal greenhouse gas emission  
24 standards.

25 Today's proposal will preserve the environmental

1 benefits and welfare protections of the LEV II standards.  
2 The amendments are limited in scope and clarify that the  
3 "deemed to comply" option only accepts compliance with the  
4 current federal standards. And as you mentioned,  
5 representatives of several of our state partners are here  
6 if support of this proposal.

7 We've coordinated closely with states that have  
8 adopted our standards, so that they'll be able to make any  
9 adjustments to their regulations, if needed, to continue  
10 to obtain the benefits of these standards in their states.

11 I'll now ask Sarah Carter of the Emissions  
12 Compliance and Automotive Regulations and Science Division  
13 to give the staff presentation.

14 Sarah.

15 (Thereupon an overhead presentation was  
16 presented as follows.)

17 STAFF AIR POLLUTION SPECIALIST CARTER: Thank  
18 you, Mr. Corey. Good morning, Chair Nichols and members  
19 of the Board. Today, I will be presenting proposed  
20 amendments to our Low Emission Vehicle III, or LEV III,  
21 greenhouse gas emission regulation.

22 --o0o--

23 STAFF AIR POLLUTION SPECIALIST CARTER: When we  
24 last presented to you in March 2017, we and U.S. EPA in  
25 their January 2017 final determination under the prior

1 administration had concluded manufacturers were still on  
2 track to meet the existing national passenger vehicle  
3 greenhouse gas emissions standards through model year  
4 2025. Although current Presi -- although the current  
5 President had announced the mid-term evaluation process  
6 would be reinstated and U.S. EPA and NHTSA announced that  
7 they intended to reconsider the final determination, we  
8 recommended continuing an option for automakers to comply  
9 with the national program in lieu of our LEV III  
10 regulation, because the U.S. EPA standards remains in  
11 place then and are still in place now.

12 But earlier this year in April 2018, U.S. EPA  
13 revised its final determination to say that the standards  
14 were no longer appropriate. And to get -- and together  
15 with the National Highway Traffic Safety Administration,  
16 or NHTSA, issued a notice of proposed rulemaking, or NPRM,  
17 that proposes a dramatic and unfounded weakening of the  
18 standards and revocation of California's authority.

19 Accordingly, staff is compelled to propose  
20 revisions to the LEV III regulation to ensure that  
21 California continues to achieve our needed greenhouse gas  
22 emission reductions.

23 --o0o--

24 STAFF AIR POLLUTION SPECIALIST CARTER: So why  
25 are greenhouse gas emission reductions from passenger

1 vehicles so critical to California?

2           It's simply because of the sheer number of  
3 passenger vehicles that operate in this state. Passenger  
4 vehicles include both light-duty vehicles, which are cars,  
5 pickups, minivans, and smaller sport utility vehicles, and  
6 medium-duty passenger vehicles, or large sport utility  
7 vehicles.

8           The medium gray areas near the tops of the bars  
9 in this chart on this slide show the contribution of  
10 light-duty vehicles, which are the majority of passenger  
11 vehicles, to California's greenhouse gas emission  
12 inventory.

13           As you can see, as of 2016, light-duty vehicles  
14 were responsible for approximately 28 percent of  
15 California's greenhouse gas emissions, and 70 percent of  
16 the emissions from transportation.

17           By 2030, the current programs reduced the  
18 light-duty vehicle contribution to 23 percent. However,  
19 yearly increases in the number of vehicles on the road and  
20 miles traveled make it more challenging to reduce  
21 emissions from this sector.

22           To put this in perspective, even with all of our  
23 currently adopted regulations in place, California's  
24 greenhouse gas emissions will still need to be reduced by  
25 about one-third in 2030 in order to meet the SB 32 target

1 of 40 percent reductions. And meeting the Governor's  
2 mid-century climate target will require considerable more  
3 effort. These targets make it critical that we continue  
4 to maximize greenhouse gas reductions from the passenger  
5 vehicle fleet.

6 --o0o--

7 STAFF AIR POLLUTION SPECIALIST CARTER: This  
8 slide shows a brief history of California's passenger  
9 vehicle greenhouse gas standards and the impact of our  
10 regulations on new vehicle emissions. Our first Pavley  
11 regulations reduced emissions for 2009 through 2016 model  
12 year vehicles. And for the first three years of these  
13 regulations we were it.

14 There was no federal control of greenhouse gas  
15 emissions until U.S. EPA adopted standards that were of  
16 comparable stringency to California's regulations for  
17 model years 2012 through 2016. This allowed for the  
18 creation of the first national program for these model  
19 years.

20 In 2012, CARB adopted our next generation of  
21 greenhouse gas standards for model years 2017 through 2025  
22 as part of the LEV III regulations. This slide shows the  
23 LEV III fleet average greenhouse gas emissions standards,  
24 incrementally pushing vehicles greenhouse gas emissions  
25 downward by about 4.6 percent per year between the 2017

1 and 2025 model years. These standards, as shown by the  
2 two lines in the figure, have separate passenger cars and  
3 light-truck categories. The light-truck categories  
4 include pickups, vans, and many of the sport utility  
5 vehicles.

6 As with the Pavley regulations, the subsequent  
7 adoption of U.S. EPA's greenhouse gas emission standards  
8 that were comparable in stringency to the California  
9 standards enables us to extend the national program for  
10 the 2017 through 2025 model years.

11 --o0o--

12 STAFF AIR POLLUTION SPECIALIST CARTER: So what  
13 is the "deemed to comply" option and why is it important?

14 This regulatory option says that automakers that  
15 meet U.S. EPA standards are "deemed to comply" with  
16 California's standards for the 2017 through 2025 model  
17 years. This was a reasonable option for California,  
18 because the basis for both the LEV III greenhouse gas  
19 emission standards and subsequent U.S. EPA federal  
20 standards was a joint technical assessment between CARB  
21 U.S. EPA, and NHTSA. This two-year comprehensive  
22 coordination between CARB and federal agency staff ensured  
23 that the U.S. EPA and CARB greenhouse gas emission  
24 standards were consistent in terms of their technical  
25 underpinnings, stringency, and provisions.

1           Consequently, the currently adopted U.S. EPA  
2 standards provided comparable benefits to LEV III. And  
3 CARB approved a "deemed to comply" option for model years  
4 2017 through 2025. This extended the national program  
5 through model year 2025.

6                           --o0o--

7           STAFF AIR POLLUTION SPECIALIST CARTER: This  
8 slide shows the benefit of a national program. The map on  
9 the left shows in solid yellow, California and the 12  
10 states that have adopted the LEV III regulation under  
11 Section 177 of the Clean Air Act. Combined, we account  
12 for approximately 35 percent of new passenger vehicle  
13 sales in the U.S.

14           Colorado is shown in striped yellow markings, as  
15 it is in the process of newly adopting the LEV III  
16 standards. Colorado represents an additional one and a  
17 half percent of new vehicle sales. The map on the right  
18 shows the benefits of a national program with greater  
19 potential for cumulative greenhouse gas benefits as it  
20 includes all U.S. vehicle sales.

21                           --o0o--

22           STAFF AIR POLLUTION SPECIALIST CARTER: So why  
23 are we here today?

24           As I mentioned earlier, in August 2018, U.S. EPA  
25 and NHTSA published a note -- a joint notice of proposed

1 rulemaking, or NPRM, which contains three primary elements  
2 that are a concern for California, and two of these are a  
3 direct attack on California's authority.

4 First, it proposes to arrest the greenhouse gas  
5 emission standards and corporate average fuel economy  
6 standards at the requirements for the 2020 model year, and  
7 sets the standards at that level through model year 2026.

8 But U.S. EPA is also proposing to withdraw the  
9 waiver granted to California in 2013 for the greenhouse  
10 gas and zero-emission vehicle elements of California's  
11 Advanced Clean Cars program. And it contends that  
12 California has disproportionately focused on greenhouse  
13 gas emissions.

14 U.S. EPA justifies withdrawal of these waivers by  
15 claiming that California does not meet the requirement for  
16 a waiver as set forth in the Clean Air Act, including that  
17 California needs its own standards to meet compelling and  
18 extraordinary conditions.

19 Finally, NHTSA is proposing a regulatory finding  
20 that California's greenhouse gas emission standards and  
21 zero-emission vehicle requirements are preempted under the  
22 Energy Policy and Conservation Act, or EPCA, as the  
23 regulations related to fuel economy standards.

24 The federal agencies assert that California  
25 regulation of tailpipe CO2 emissions both through its

1 greenhouse gas standards and zero-emission vehicle  
2 regulations are de facto fuel economy standards, because  
3 CO2 is a direct and inevitable byproduct of the combustion  
4 of carbon-based fuels to make energy.

5 --o0o--

6 STAFF AIR POLLUTION SPECIALIST CARTER: This  
7 graph shows what the effect of the federal proposal would  
8 be on new vehicle emissions in California. The yellow  
9 line shows the projected greenhouse gas emission average  
10 for passenger vehicles sold in California. This fleet  
11 average was calculated based on the sales weighted  
12 standard for new passenger cars, pickup trucks, and sport  
13 utility vehicles that are projected to be sold in  
14 California for these model years.

15 The green solid line shows the projection for  
16 vehicle standards in California if the federal proposal is  
17 finalized. The green dashed line further accounts for the  
18 proposal to eliminate greenhouse gas emission credits for  
19 reducing the usage of traditional air conditioning  
20 refrigerants, which are short-lived climate pollutant.

21 As you can see, if EPA and NHTSA finalize the  
22 current federal proposal, and California continues to  
23 allow to the "deemed to comply" compliance option, or is  
24 denied its waiver for its emission standards, new  
25 passenger vehicles sold in California in model year 2025

1 will be emitting on average 57 grams per mile higher  
2 greenhouse gas emissions than the current standard.

3 --o0o--

4 STAFF AIR POLLUTION SPECIALIST CARTER: To  
5 provide some perspective, the benefit of the existing  
6 standards are projected to provide approximately 25  
7 million metric tons of greenhouse gas reductions from the  
8 overall passenger vehicle fleet in California in 2030  
9 compared to the original baseline in adopting the LEV III  
10 regulations.

11 This represents approximately 15 percent of the  
12 greenhouse gas reductions needed to get from California's  
13 2020 target to the 2030 target. The federal proposal on  
14 the other hand would generate 12 million metric tons of  
15 more emissions in 2030 cutting the projected benefits  
16 nearly in half. For comparison, this loss alone would  
17 wipe out all of the 2030 benefits from the low carbon fuel  
18 standard regulation changes that were considered by the  
19 Board just yesterday.

20 --o0o--

21 STAFF AIR POLLUTION SPECIALIST CARTER: Although  
22 the federal proposal does not directly alter criteria  
23 pollutant standards, flat-lined U.S. EPA greenhouse gas  
24 standards and corresponding NHTSA fuel economy standards  
25 would, nonetheless, increase public exposure to criteria

1 pollutants and toxic air contaminants due to an increase  
2 in fuel usage from the less stringent standards.

3 Flat-lined standards caused increased gasoline  
4 consumption and resultant increased emissions from fuel  
5 production, delivery, and vehicle refueling. These  
6 emissions will disproportionately impact the Los Angeles  
7 area where half of state refinery activity is located, and  
8 where additional NOx emission reductions are still needed  
9 to meet our SIP commitments.

10 Here, the passenger vehicle fleet is projected to  
11 be at 15 tons per day of NOx emissions in 2031 with our  
12 current regulations, but SIP commitments require even more  
13 action to eliminate another one-third of these emissions  
14 by 2031.

15 Under the relaxed NPRM proposal, NOx emissions  
16 would increase in the Los Angeles area by one and a  
17 quarter tons per day making the challenge even more  
18 difficult. Increased local exposure to benzene and other  
19 toxics would also result from the federal proposal  
20 especially in disadvantaged communities.

21 Finally, the loss of our ZEV Program and  
22 authority would eliminate our only viable strategy for  
23 achieving the criteria pollutant reduction requirements  
24 needed for SIP compliance, and the greenhouse gas  
25 reduction requirements needed to meet 2030 and 2045

1 targets.

2 --o0o--

3 STAFF AIR POLLUTION SPECIALIST CARTER: For all  
4 of the reasons described to you today, staff proposes  
5 clarifying the text of the "deemed to comply" provision to  
6 affirm that California only accepts compliance with the  
7 currently adopted federal greenhouse gas emission  
8 standards. Those are the standards to which CARB agreed  
9 to accept compliance because they will provide  
10 substantially equivalent greenhouse gas emission standards  
11 as California's and are supported by the evidence  
12 establishing that they are feasible and cost effective.

13 The proposed federal rule that would arrest the  
14 standards at the levels for model years 2020 are not  
15 supported and do not adequately reduce emissions. I  
16 should mention here that the proposed amendments will not  
17 immediately eliminate the "deemed to comply" option. This  
18 provision and the current national program will still be  
19 in effect, as long as U.S. EPA does not change the current  
20 federal greenhouse gas emission standards.

21 However, if U.S. EPA changes the federal  
22 standards, automakers will be required to separately  
23 comply with California's current standards, and U.S. EPA's  
24 standards for those model years for which changes to the  
25 federal standards apply.





1 reasoning.

2           Our comments, together with those of many others,  
3 will seek to make clear that the administrative record is  
4 inadequate for the federal agencies to proceed as  
5 proposed, and will support our further legal challenges,  
6 if necessary.

7           Specifically, our comments will address why the  
8 NPRM is contrary to the language and intent of the Clean  
9 Air Act, the Energy Policy and Conservation Act, the  
10 National Environmental Policy Act, and the federal  
11 Administrative Procedures Act.

12           Our comments will also show that the NPRM is  
13 based on unreasonable assumptions and flawed modeling. It  
14 will not make the road safer and it's bad economics. It  
15 will cost jobs and raises fuel costs to consumers.

16           Comments on the NPRM are due to the docket by  
17 October 26th. In addition to preparing comments on the  
18 NPRM, CARB continues to participate in ongoing discussions  
19 with the federal administration on their proposal. CARB  
20 and automakers have expressed interest in finding a path  
21 to continue a national program, and CARB remains committed  
22 to working towards that goal.

23           Both the NPRM and 45-day notice for this proposal  
24 asked for stakeholder comments on additional flexibilities  
25 that we should consider adding to or extending in the

1 current program that could reduce costs for automakers,  
2 but maximize emission benefits and progress in long-term  
3 technologies necessary to meet California's climate change  
4 goals.

5 We will evaluate the potential of any suggestions  
6 received to determine whether any of these could provide a  
7 path forward to maintaining a national program for  
8 reducing greenhouse gas emissions from light-duty  
9 vehicles.

10 --o0o--

11 STAFF AIR POLLUTION SPECIALIST CARTER: In  
12 conclusion, staff recommends that the Board approve  
13 today's proposed amendments to the LEV III greenhouse gas  
14 regulation to clarify that the "deemed to comply" U.S. EPA  
15 compliance option is available only for the federal  
16 light-duty vehicle greenhouse gas -- for the current  
17 federal light-duty vehicle greenhouse gas emission  
18 standards.

19 We recommend the Board direct the Executive  
20 Officer to file today's proposed changes with the  
21 California Office of Administrative Law as expeditiously  
22 as possible to facilitate adoption of these amendments by  
23 our Section 177 state partners, unless an agreement is  
24 reached with the federal administration to maintain a  
25 national program that meets California's greenhouse gas

1 emission reduction needs.

2           The Executive Officer will continue exploring  
3 options for a unified national program and appraise the  
4 Board of any developments that are in keeping with our air  
5 quality and climate change goals.

6           This concludes my presentation.

7           CHAIR NICHOLS: Thank you very much. I think  
8 there's going to be a lot of discussion and questions and  
9 comments from the Board on this item. But before we  
10 proceed to that or to the witnesses, I do want to  
11 recognize the presence of our 177 partners who are here.  
12 I know they have been actively participating in all of  
13 these developments and I would like to specifically  
14 welcome them and to ask for them to come forward and make  
15 their presentation to us at this time.

16           MR. KLEE: Good morning. I'm Robert Klee, the  
17 Commissioner of Connecticut's Department of Energy and  
18 Environmental Protection. And I want to start by saying a  
19 heartfelt thank you to Chair Nichols. The -- and  
20 California and the Board for your leadership role in  
21 setting the nation on a clear and most importantly  
22 reasonable and feasible path to a low carbon  
23 transportation sector.

24           I'm here today to express Connecticut's strong  
25 support for two things. One, Connecticut supports

1 maintaining the existing harmonized 2021 to 2025  
2 light-duty vehicle greenhouse gas emissions standards that  
3 California, along with Connecticut and the other Section  
4 177 states adopted in 2013 following the harmonization  
5 agreement of 2009; and two, that California's proposal to  
6 amend the "deemed to comply" provisions within the  
7 harmonized greenhouse gas standards is a reasonable  
8 approach, given it will only preclude this compliance  
9 flexibility if the federal standards agreed upon in 2009  
10 from the '21 to '25 model years are changed by EPA.

11 In Connecticut we are in the process of making  
12 corresponding changes to our clean car regulations with  
13 respect to the "deemed to comply" provisions of the  
14 greenhouse gas emission standards. But we need California  
15 to act quickly to finalize your changes, so we can run our  
16 full regulatory process in Connecticut's regulatory  
17 structure.

18 In Connecticut, your regs are not adopted  
19 automatically by reference, so we have to run a full  
20 regulatory process, which is why we strongly oppose the  
21 delay proposed by the automobile manufacturers. Even  
22 though we support the continuing dialogue, any delay would  
23 make it impossible for Connecticut to achieve the  
24 incorporation of your regulations in Connecticut.

25 The Section 177 states that have adopted the

1 California Clean Cars Program, several of them decades  
2 ago, recognize the urgency of the climate crisis the world  
3 now faces. Like California, our states are committed to  
4 taking real action to combat global warming. Connecticut,  
5 like California, needs meaningful mobile source reductions  
6 to meet our own critical public health and greenhouse gas  
7 emission reduction targets.

8 In Connecticut, those are embodied in  
9 Connecticut's Global Warming Solutions Act, which sets  
10 targets for 2020, 2030, and 2050. These are ambitious  
11 greenhouse gas targets in statute. Forty-five percent  
12 economy-wide reductions by 2030, and 80 percent  
13 economy-wide reductions by 2050. In Connecticut, the  
14 transportation sector accounts for 43 percent of our  
15 state's greenhouse gas emissions and 65 percent of our  
16 smog-forming emissions. Air quality problems, and ozone  
17 in particular, continue to be a challenge for Connecticut,  
18 given the impacts of air pollution transport.

19 We cannot achieve compliance with the federal  
20 ambient air quality standards for ozone or the dramatic  
21 reductions in greenhouse gas emissions that is needed to  
22 meet our Connecticut legislatively mandated targets  
23 without a near complete transformation in the  
24 transportation sector, and California's rules are the  
25 foundation.

1           Without them, we'd have to take other drastic and  
2 frankly uncharted measures to meet our state's statutory  
3 greenhouse gas targets.

4           So Connecticut continues to support the  
5 harmonization of the greenhouse gas emission standards  
6 agreed to in 2009, standards which were established  
7 through the shared experience and expertise of California,  
8 the EPA, our Section 177 states, and the auto  
9 manufacturers.

10           From our perspective a deal is a deal until one  
11 side breaks its faith. EPA is certainly signaling that,  
12 and their intent to abandon this partnership. Any federal  
13 actions that weakens the national greenhouse gas standards  
14 or seeks to curtail California's waiver authority for  
15 greenhouse gas emission standards and their Zero Emission  
16 Vehicle Program is a direct challenge to the state  
17 sovereignty of California and our 177 states.

18           Furthermore, it would cripple our ability to  
19 protect public health and achieve our climate goals. This  
20 is unacceptable and we will take all necessary action to  
21 prevent this outcome.

22           I'm submitting a written copy of my testimony  
23 that will go into more detail on some of the aspects,  
24 because I do want to preserve time for my colleagues who  
25 have traveled quite a way to be here today.

1           But I will summarize those written comments with  
2 three key points. First, the CARB proposal should have no  
3 effect on California's current waiver under the section  
4 209 of the Clean Air Act; second, CARB's proposal is not  
5 linked to the lead time requirements in Section 177 in the  
6 Clean Air Act; and third, CARB's proposal is not in any  
7 way linked to the federal fuel economy rules. And my  
8 written comments go into more detail there.

9           Because I wanted to close with the story of where  
10 this -- these rules are having a real positive effect,  
11 particularly in our state, and our -- or my state of  
12 Connecticut and our states across the region, and they're  
13 transforming the transportation sector as we know it, as  
14 the automobile manufacturers are developing electric  
15 vehicles in all shapes and sizes and they're showing up on  
16 our roads.

17           They are positively impacting California and all  
18 the states outside of California as this new sector  
19 economically grows. For example, the sales of electric  
20 vehicles eligible for our very popular cheaper rebate in  
21 Connecticut jumped nearly 200 percent in July and August.

22           We stand to benefit directly from economic growth  
23 in this cleantech space in one particular area where  
24 Connecticut has been a leader in hydrogen fuel cell  
25 development. Connecticut's fuel cell companies continue

1 to partner with others, and pioneer the development of  
2 fuel cell applications in the transportation sector.

3           Thirty percent of the nation's fuel cell jobs are  
4 located in Connecticut. We are ranked third for U.S. Fuel  
5 cell patents from 2002 to 2015. The hydrogen and fuel  
6 cell supply chain in Connecticut is contributing  
7 significantly to our economy. More than 700 million  
8 dollars in revenue, more than 3,400 jobs and in regional  
9 employment in Connecticut.

10           And there is great potential for growth as these  
11 vehicles in the light-duty, medium-duty, and heavy-duty  
12 space are growing in their applications. And it's that  
13 economic development opportunity is also part of the  
14 reason why I've come out here to California to testify.  
15 And this is where these high-tech research and advance  
16 ment -- manufacturing jobs are so important to states  
17 like ours.

18           This technological and economic expansion will  
19 not happen at the same pace, and may not happen at all  
20 without increasingly stringent motor vehicle emission  
21 standards, and zero-emission vehicle requirements that are  
22 being driven -- that are driving investment in this  
23 cleantech space.

24           So in sum, California's leadership is  
25 particularly critical now, as the Trump administration

1 tries to move ahead with weakening federal greenhouse gas  
2 emission standards, and attacking states' rights by  
3 attempting to withdraw California's waiver for its  
4 existing greenhouse gas emission standards, and the  
5 zero-emission vehicle requirements.

6           These environmentally unprotective actions, which  
7 is hard to imagine as the Commissioner of an energy and  
8 environmental protection agency. But these unprotective  
9 actions to try to eliminate California's authority, and  
10 that of our 177 states, will have direct and negative  
11 effects on the health and welfare of our citizen.

12           Connecticut will continue to support California  
13 and our other 177 states to fight this misguided effort.

14           Thank you very much.

15           CHAIR NICHOLS: Thank you, Commissioner Klee.

16           MS. KIRBY: Good morning, Mary -- Chair Nichols  
17 and members of the Board, Vice Chair Berg. My name is  
18 Christine Kirby. I'm the Assistant Commissioner at the  
19 Massachusetts Department of Environmental Protection for  
20 the Bureau of Air and Waste. On behalf the Baker-Polito  
21 administration, I am here to support CARB's proposed  
22 amendments to the LEV III greenhouse gas emission  
23 standards to ensure the stringency of the greenhouse gas  
24 standards for new passenger cars and light-duty trucks.

25           Specifically, we support the proposed revisions

1 to the "deemed to comply" provisions that would apply to  
2 only the current federal greenhouse gas standards in the  
3 event the federal standards are weekend as proposed.

4           Massachusetts, like Connecticut and the other 177  
5 states, intends to propose and adopt corresponding changes  
6 to our State LEV regulations that will require continued  
7 automaker compliance with the current stringent vehicle  
8 standards in Massachusetts.

9           As background, Massachusetts first adopted the  
10 California Low Emission Vehicle program in 1991,  
11 applicable to model year 1995 vehicles. Since that time,  
12 we've relied on the standards to reduce ozone precursors  
13 and other pollutants, to reduce greenhouse gas emissions,  
14 and to develop the market for zero-emission vehicles, or  
15 ZEVs.

16           Due in part to our adoption of the California Low  
17 Emission Vehicle program, we are now in attainment of the  
18 federal ozone standards, although we have had a number of  
19 exceedances this summer, so we need to continue to have  
20 the program place. We have reduced greenhouse gas  
21 emissions significantly below the businesses-as-usual  
22 case. And I will get into why we still need to reduce  
23 transportation emissions.

24           And we are now, like Connecticut, seeing the ZEV  
25 market take off. We're seeing more and more vehicles take

1 advantage of our consumer rebate program MOR-EV in  
2 Massachusetts.

3           By my count, since 1991, we have amended our LEV  
4 program 10 or more times to keep current with California.  
5 And this is one of the most important, if not the most  
6 important, LEV rule makings Massachusetts will do to  
7 continue our progress on clean air and climate change  
8 mitigation.

9           The Massachusetts Global Warming Solutions Act,  
10 or GWSA, mandates that greenhouse gas emissions be reduced  
11 by 80 percent below 1990 levels in 2050. And as you will  
12 here today, many other states have that same mandate.

13           In addition under GWSA, a stringent reduction  
14 goal was set in 2010 under the statute requiring a 25  
15 percent reduction in 2020 from 1990 levels. And then GWSA  
16 further requires interim 2030 and 2040 goals to ensure  
17 adequate progress towards 2050.

18           Massachusetts most recent greenhouse gas  
19 inventory for 2015 shows considerable progress towards the  
20 2020 goal. We have reduced emissions by 19.7 percent  
21 below 1990 levels economy wide. However, total  
22 transportation emissions are roughly the same as they were  
23 in 1990, and have increase in terms of the overall  
24 percentage of total emissions, increasing from 32.3  
25 percent in 1990 to approximately 39 percent in 2015, which

1 was our most complete emissions inventory. This is due to  
2 increasing vehicle miles traveled, which has offset the  
3 gain in vehicle greenhouse gas standards.

4           The numbers in other 177 states tell the same  
5 story. We need to continue to reduce emissions from the  
6 transportation sector to meet both our near-term and  
7 long-term greenhouse gas reduction goals.

8           In contrast to the transportation sector,  
9 greenhouse gas emissions in Massachusetts from the  
10 electricity sector have steadily declined due to our  
11 participation in the regional greenhouse gas initiative,  
12 otherwise known as RGGI, energy efficiency program, and  
13 our renewable portfolio standard among other efforts.

14           A year ago, Massachusetts went beyond RGGI and  
15 adopted a fossil fuel fired emissions cap for electricity  
16 generating units, and will require those facilities to  
17 reduce their emissions by 2.5 percent a year out to  
18 2020 -- excuse me, out to 2050. This program is now  
19 underway and we expect to auction off allowances later  
20 this year or early next.

21           However, our success in meeting the challenge of  
22 global warming depends on how successful we are in  
23 reducing transportation emissions. There is no question  
24 that deep cuts in transportation emissions will be  
25 required. And the two critical strategies that we often

1 mention is reducing emissions from motor vehicles, and  
2 electrification of the transportation sector. Both of  
3 these are required through the Massachusetts adoption of  
4 the California standards.

5           Because Massachusetts is preempted from opposing  
6 its own regulations on new vehicles, it relies on  
7 stringent federal and California standards. The current  
8 harmonized greenhouse gas and CAFE standards are forecast  
9 to result in a 34 percent and light-duty vehicle  
10 greenhouse gas emissions in 2025. But because vehicles  
11 last a decade, weakened standards will undermine  
12 Massachusetts ability to meet the greenhouse gas limits of  
13 GWSA, including our ability to set interim limits for 2030  
14 and 2040, and to meet the long-term goals.

15           Without these standards, and I think Commissioner  
16 Klee referred to this, we will be looking at many more  
17 other onerous programs to reduce transportation emissions,  
18 because we know that that is the critical part to meeting  
19 our long-term goals.

20           So in closing, we are prepared to join California  
21 and the other Section 177 states to protect the integrity  
22 of the greenhouse gas standards, and the LEV program, as  
23 well as our state authority under the federal Clean Air  
24 Act.

25           Thank you for the opportunity to testify before

1 you today, and now I'll turn it over to Deborah Mans from  
2 New Jersey.

3 MS. MANS: Good morning. My name is Debbie Mans  
4 and I'm the Deputy Commissioner of the New Jersey  
5 Department of Environmental Protection.

6 Thank you to California for your leadership on  
7 this issue, and for working collaborty -- collaboratively  
8 with New Jersey and other 177 states to protect public  
9 health and the environment. New Jersey has provided  
10 written comments earlier in the week in addition to our  
11 testimony today.

12 New Jersey Governor Murphy has committed to using  
13 every tool at our disposal to fight efforts to rollback  
14 federal fuel emission standards that save New Jersey  
15 consumers money, protect the environment, and drive  
16 innovation in the transportation sector.

17 As a northeast coastal state with 1,792 miles of  
18 shoreline, New Jersey is particularly vulnerable to rising  
19 sea levels and other affects of global warming. We have  
20 experienced a dramatic increase in the frequency,  
21 duration, and intensity of storm events. Hurricane Sandy,  
22 one of the most destructive storms ever to hit our state,  
23 was a wake-up call.

24 Five years later, the storm is still fresh in  
25 everyone's memory, and the New Jersey, New York coastal

1 area bore the brunt of the storm. The storm surge was  
2 nine to 10 feet above normal high tide along much of New  
3 Jersey coast, and caused \$30 billion in damages and loss  
4 of life.

5 We understand first-hand the urgent need to  
6 reduce our greenhouse gas emissions and the consequences  
7 of failing to act. Like many other states, New Jersey has  
8 also established aggressive, science-based greenhouse gas  
9 emission reduction goals. New Jersey's Global Warming  
10 Response Act calls for an 80 percent reduction in  
11 greenhouse gas emissions from 20 -- 2006 levels by 2050.

12 Achieving this goal will require a 2.2 percent  
13 reduction in greenhouse gas emissions each year through  
14 2050. And much of this reduction will need to come from  
15 our transportation sector, which now comprises 42 percent  
16 of New Jersey's emissions.

17 The transportation sector is our biggest  
18 challenge. Unlike other economic sectors, transportation  
19 sector emissions in New Jersey are continuing to rise.  
20 This is because the increases in fuel efficiency we've  
21 seen in recent years have been offset by continuing  
22 increase in vehicle miles traveled.

23 Our legislature adopted the California motor  
24 vehicle emissions standards nearly 15 years ago. Today,  
25 as the Trump administration prepares to reverse course on

1 critically important federal motor vehicle greenhouse gas  
2 and fuel economy standards, New Jersey is relying even  
3 more on California's Low Emission Vehicle program, not  
4 only to prevent backsliding in our state, but to ensure  
5 continued forward progress.

6           New Jersey values working collaboratively with  
7 California and other states to reduce vehicle emissions  
8 and get cleaner cars out on the road. Earlier this year,  
9 Governor Murphy signed the state zero-emission vehicles  
10 program memorandum of understanding committing New Jersey  
11 to work with other states to support the deployment of  
12 zero-emission vehicles at home, in the Garden State, and  
13 across the country.

14           The amendments to the "deemed to comply"  
15 provisions of the California regulations that are under  
16 consideration by the Board today make necessary changes to  
17 the regulations that are consistent with the original  
18 intent and the very basis for accepting compliance with  
19 federal standards as a demonstration of compliance with  
20 the California standards, that federal emission standards  
21 will provide equivalent emissions reductions.

22           Now that appears that may no longer be the case.  
23 California has New Jersey's strong support for the  
24 amendments under consideration by the Board today. Thank  
25 you for your work on this.

1 CHAIR NICHOLS: Thank you. Welcome back.

2 MR. SNYDER: Good morning, Chair Nichols and  
3 members of the Board. I'm Jared Snyder, Deputy  
4 Commissioner of the New York State Department of  
5 Environmental Conservation. And thank you for providing  
6 us the opportunity to testify today.

7 New York State strongly supports the staff  
8 proposal to clarify the "deemed to comply" provision.  
9 Compliance with the significantly weakened, and we believe  
10 unlawful proposed federal emission standards, cannot be  
11 "deemed to comply" with the more protective CARB  
12 standards, standards that have been adopted by New York  
13 and other Section 177 states, and are essential to protect  
14 our citizens from the threat of climate change.

15 Since experiencing the devastation of Super Storm  
16 Sandy firsthand nearly six years ago, Governor Cuomo has  
17 made reducing the pollution that is causing climate change  
18 a top priority in New York. In New York, severe weather  
19 events are now the norm and disastrous. Significant  
20 flooding from storms occurs at alarming frequency. Sea  
21 levels are projected to rise up to six feet by 2100, which  
22 would make the flooding of New York's tidal areas routine.

23 Climate change also has substantial public health  
24 benefits. We just completed an ozone season where all the  
25 monitors in the New York City metro area showed

1 non-attainment with the ozone standard, and half of which  
2 showed non-attainment with the old 2008 standard.

3           On July 2nd, a particularly hot day, we  
4 experienced ozone levels in the Lower Hudson Valley that  
5 were the highest seen in the past decade, levels that are  
6 very unhealthy for the general public according to EPA's  
7 rating system. At Governor Cuomo's direction, New York is  
8 committed to fighting the cause of climate change through  
9 a comprehensive strategy that is designed to reduce  
10 greenhouse gas emissions and bolster clean renewable  
11 energy development.

12           Together with the other 15 states in the U.S.  
13 Climate Alliance, New York has committed to the principles  
14 of the Paris agreement. We've adopted ambitious  
15 greenhouse gas reduction goals of 40 percent reduction by  
16 2030, and 80 percent by 2050. We've made multi-billion  
17 dollar investments in solar energy and renewable energy,  
18 poured millions into geothermal and energy efficiency, and  
19 we're poised to develop the largest offshore wind farm off  
20 the east coast.

21           Transportation, however, is New York's largest  
22 greenhouse gas emissions sector. Transportation emissions  
23 grew 23 percent between 1990 and 2014. And while we  
24 started to bend that curve downward, much more is needed  
25 to meet our climate goals -- the science-based climate

1 goals. And that will be impossible without strict vehicle  
2 emission standards, including the zero-emission vehicle  
3 mandate.

4 To ensure that consumers find electric vehicles  
5 attractive, we've invested and continue to invest  
6 extensively in electric vehicle infrastructure. Under the  
7 Charge New York program, we are committed to growing  
8 from -- increasing from 2000 public chargers to 10,000  
9 public chargers by 2021.

10 Just a few months ago, the New York Power  
11 Authority announced \$250 million Evolve New York program,  
12 \$250 million for new electric vehicle infrastructure in  
13 New York State. And proceedings of the Public Service  
14 Commission are getting utilities in the game.

15 DEC and NYSEERDA also provide tens of millions of  
16 dollars to rebates -- electric vehicle rebates to  
17 municipalities and consumers. These programs have  
18 contributed to a 67 percent increase in the number of  
19 electric vehicles sold from 2016, when we adopted those  
20 incentives, to 2017, 67 percent increase.

21 And we just announced that the \$128 million  
22 vehicle mitigation trust proceeds in New York will also be  
23 invested to transform our transportation network, leaning  
24 heavily on electrification.

25 We are proud to be long-term partners with

1 California in working to advance motor vehicle standards  
2 and reduce emissions. We've supported harmonized national  
3 standards for greenhouse gas emissions because it spreads  
4 benefits across the entire country, provides regulatory  
5 stability and predictability to industry, and  
6 contributes -- visitors and residents alike are  
7 contributing to the emission reductions needed.

8           But now, due to a federal proposal that will  
9 increase petroleum consumption and the profits of oil  
10 companies, we support the staff proposal to clarify the  
11 "deemed to comply" provision.

12           The California regulatory provision has always  
13 been technology forcing. And the federal proposal is a  
14 giant leap backwards. And we also support continued  
15 dialogue however with industry and the federal regulators  
16 to explore whether a meaningful harmonized program that  
17 achieves the emission reductions needed can be realized.

18           The authority for California to adopt these  
19 regulatory programs is clear in section 209 of the Clean  
20 Air Act, and by extension, the authority for the Section  
21 177 states is also clear. That authority is a critical  
22 component of New York's effort to address not only  
23 greenhouse gases, but also criteria pollutants and their  
24 precursors.

25           Indeed, California initially adopted the electric

1 vehicle mandate years ago to reduce criteria pollutants,  
2 and New York initially adopted it for the same reason. So  
3 when the Board finalizes this action and adopts the staff  
4 proposal, we will commence a rulemaking to adopt it in New  
5 York as expeditiously as possible.

6 And when the time comes, New York will be  
7 prepared to sue the federal government for its illegal,  
8 irresponsible, and immoral regulatory action, which is  
9 nothing more than a thinly veiled giveaway to the fossil  
10 fuel industry.

11 While the current administration may want to  
12 reverse the progress we've made to reduce climate  
13 pollution, New York will continue to protect our  
14 communities and our environment.

15 Thank you very much.

16 CHAIR NICHOLS: Thank you.

17 BOARD MEMBER GIOIA: We like that New York  
18 bluntness.

19 (Laughter.)

20 MS. FELDON: Now, how do I follow that?

21 (Laughter.)

22 MS. FELDON: Good morning, Chair Nichols, Vice  
23 Chair Berg, members the Board. My name is Leah Feldon.  
24 I'm the Deputy Director for the Oregon Department of  
25 Environmental Quality. Thank you for the opportunity to

1 address you regarding this rulemaking today.

2           Since 2012, EPA, NHTSA, the State of California,  
3 and the major automakers have agreed on a single national  
4 program that regulates greenhouse gas and fuel efficiency  
5 standards from all light-duty vehicles.

6           This harmonized standard provided regulatory  
7 certainty for automakers, and lowered costs to consumers  
8 for the last six years. Now, the Trump administration is  
9 reneging on that agreement with its proposal to freeze  
10 federal light-duty vehicle greenhouse gas standards  
11 without adequate reasoning. This regression is not  
12 acceptable to Oregon, and we are concerned with the  
13 regulatory uncertainty this causes both for automakers,  
14 and in the ability of Oregon to make required progress in  
15 greenhouse gas reductions.

16           Global warming has had a serious impact in  
17 Oregon. We've seen an increase in the number and  
18 intensity of forest fires. Since 1970, the length of  
19 Oregon's average fire season has grown by 78 days. Last  
20 year, Oregon experienced 2,000 wild fires that burned  
21 roughly 665,000 acres of forest and range land. It cost  
22 the state nearly half a billion dollars to suppress these  
23 fires.

24           Wildfire smoke has caused the southern Oregon  
25 community of Medford to experience 34 days of unhealthy

1 and hazardous levels this past year. Oregon must take  
2 steps now to address the causes of global warming and  
3 mitigate its impacts. Like other section 177 states,  
4 Oregon has established an aggressive long-term greenhouse  
5 gas emission reduction goal, which is 75 percent below  
6 1990 levels by the year 2050. While emissions from all  
7 other sectors are declining in Oregon, emissions from  
8 motor vehicles are climbing.

9           The transportation sector is the single largest  
10 source of greenhouse gas emissions in Oregon comprising 39  
11 percent of the statewide emissions. In order to meet our  
12 State greenhouse gas targets, transportation sector  
13 emissions must transition to cleaner fuels, reduce the  
14 number of miles driven, and convert to cleaner vehicles.

15           We've adopted state programs to lower the carbon  
16 intensity of our transportation fuels, to integrate land  
17 use and transportation planning, to reduce vehicle miles  
18 traveled per capita, and decarbonize our electricity. But  
19 we must continue to have the cleanest and most efficient  
20 passenger cars and trucks available in Oregon as well.

21           Together, these programs can give us meaningful  
22 greenhouse gas reductions. But without the appropriate  
23 emissions standards, the success of our other programs is  
24 at risk because the Clean Air Act preempts us from  
25 adopting our own motor vehicle emission standards. Since

1 2005, we have relied solely on California's authority to  
2 set the more stringent motor vehicle emission standards  
3 that we need to help us meet our climate goals and our air  
4 quality goals.

5           It serves as a critical backstop to a weakened  
6 federal program. It is imperative to ensure that  
7 innovations in clean car technology continue. We strongly  
8 support the provided -- proposed revisions to the "deemed  
9 to comply" regulatory provisions that are under  
10 consideration by the Board today, and will follow shortly  
11 with our own corresponding rule changes to ensure that  
12 Oregon will continue to require greenhouse gas standards  
13 as agreed to and determined to be achievable by EPA under  
14 the previous administration.

15           Preservation of the LEV III standards is  
16 important to Oregon, and we applaud you for your  
17 leadership in preserving these critical standards.

18           Thank you again for the opportunity to address  
19 the Board today. I'll now turn it to my colleague from  
20 Vermont.

21           MS. HALES: Good morning. My name is Heidi Hales  
22 and I'm Director of the State of Vermont's Air Quality and  
23 Climate Division. Thank you for the opportunity to  
24 provide comment to you today.

25           Like many other states, Vermont has aggressive

1 greenhouse gas reduction goals and wants to do its share  
2 to address climate change. Vermont's adoption in 2005 of  
3 California's first-in-the-nation greenhouse gas emission  
4 standards holds an important place in our state's and  
5 indeed nation's history of curbing greenhouse gas  
6 emissions from motor vehicles.

7           As many of you will recall, shortly after Vermont  
8 adopted California's greenhouse gas standards, the  
9 automobile industry filed a lawsuit alleging that the  
10 regulations were preempted by the Energy Policy  
11 Conservation Act.

12           Almost two years later, the U.S. district court  
13 in Vermont upheld Vermont's regulations and rejected all  
14 of the automobile industry's preemption claims.

15           The court's well established -- I mean,  
16 well-reasoned opinion helped to clear the way for a  
17 favorable decision in a similar case in California,  
18 upholding EPA's decision to grant a waiver for the  
19 California standards.

20           Climate change is happening now and is evident in  
21 Vermont. During the past 50 years, Vermont's climate has  
22 shown a clear warming trend in all seasons, especially  
23 winter.

24           Climate change is also altering the frequency,  
25 timing, intensity, and duration of extreme weather events

1 that include periods of drought, severe storms, and  
2 resultant floods that damage property and infrastructure.

3           These factors have contributed to increased  
4 flooding, with almost twice as many FEMA declared  
5 disasters in Vermont from 2007 to 2016, as compared to the  
6 previous 10 years.

7           Changes in local climate will also impact  
8 Vermont's environment and economy by affecting activities  
9 dependent on seasonal climate patterns, such as maple  
10 sugaring, farming, fall foliage tourism, timber  
11 harvesting, and winter sports. Climate change is a  
12 critical issue facing Vermont citizens ecosystems and  
13 economic vitality.

14           As far as Vermont is concerned, the science and  
15 economics of reducing greenhouse gas emissions from  
16 automobiles are as irrefutable as a right under Section  
17 177 of the Clean Air Act to adopt and enforce California's  
18 greenhouse gas emission standards in lieu of federal  
19 standards.

20           In the northeast, outside of the beltway, this is  
21 a bipartisan issue. Since Vermont first adopted  
22 California's standards in 1996, we've had two Republican  
23 governors, including our current governor, and two  
24 Democratic governors. For over two decades now, we've had  
25 unwavering support for Vermont's decision to adopt and

1 enforce California's motor vehicle emission standards.

2           The California standards are a critical component  
3 of Vermont's air pollution control program, because motor  
4 vehicles are the largest source of ozone-forming  
5 pollutants, air toxics, and greenhouse gases in Vermont.

6           With respect to greenhouse gases, transportation  
7 accounts for nearly 45 percent of Vermont's greenhouse gas  
8 emissions. While we recognize that climate change is a  
9 complicated problem that will not be solved by any one  
10 action, regulations that increase in stringency over time  
11 to reduce greenhouse gas emissions from passenger vehicles  
12 are a critical step in the right direction.

13           Therefore, Vermont strongly supports the proposed  
14 amendments to California's light-duty greenhouse gas  
15 regulations to clarify the "deemed to comply" option. It  
16 will not be available if week or federal standards for  
17 model years 2021 to 2025 are adopted.

18           This proposal embodies the fundamental  
19 understanding behind the "deemed to comply" provision,  
20 which is that the federal program would provide greenhouse  
21 gas emission reductions that are substantially equivalent  
22 to the California program.

23           Having it any other way would defeat the very  
24 purpose of the California program, and the decision by  
25 Vermont and other Section 177 states to exercise their

1 right to adopt and enforce California's standards in lieu  
2 of the federal standards, by subjecting them to less  
3 protective federal standards.

4 Thank you again for the opportunity to provide  
5 comment today.

6 CHAIR NICHOLS: I have to apologize for a little  
7 bit of the byplay that's been going on up here. We were  
8 really admiring the photo that you used on your slide for  
9 Vermont. And all of us who have every been in Vermont  
10 during that season of the year are feeling an intense  
11 nostalgia, if not desire, to actually get on the road and  
12 go visit.

13 MS. HALES: Well, we hope you visit.

14 BOARD MEMBER GIOIA: Do you like the no traffic  
15 part on the road or do you like the --

16 (Laughter.)

17 CHAIR NICHOLS: All of it. All of it.

18 (Laughter.)

19 MS. HALES: Thank you.

20 CHAIR NICHOLS: Thank you.

21 MR. CLARK: Good morning, Chair Nichols, members  
22 of the Board. My name is Stu Clark. I'm here on behalf  
23 of the State of Washington and Governor Jay Inslee. I'm  
24 the manager of the Air Quality Program for the state.  
25 Thank you for the opportunity to speak with you this

1 morning.

2           We are just now hopefully reaching the end of  
3 another terrible and tragic wildfire season in the west.  
4 In August, my state was choking on smoke from wildfires  
5 that destroyed hundreds and hundreds of thousands of  
6 acres, and exposed millions of our residents to hazardous  
7 levels of fine particulate pollution.

8           In Washington, as in California, climate change  
9 has made our fire season longer and increased the size and  
10 intensity of our wildfires. And by the middle of this  
11 century climate researchers predict wildfires will destroy  
12 twice as many acres as temperatures continue to rise and  
13 our forests bake.

14           For those of us who live in the west, climate  
15 change is not an abstract far-off problem. In Washington,  
16 essential water supplies for our seven million residents  
17 are threatened by declining snowpack, as is our  
18 multi-billion dollar agricultural industry.

19           The Pacific Northwest's iconic salmon and Orcas  
20 are threatened with extinction. Sea level rise is  
21 threatening our shorelines, infrastructure, and coastal  
22 communities, and our multi-million dollar shellfish  
23 industry is facing decimation from ocean acidification.

24           As the current federal administration ignores the  
25 threat of climate change and backpedals on its

1 responsibility to reduce greenhouse gas emissions

2           It is more critical than ever for us, as State  
3 officials, to take action. In Washington, we have adopted  
4 aggressive gas reduction targets, and motor vehicles are by  
5 far the largest source of those emissions. We will not  
6 meet our targets without significant additional reductions  
7 from the transportation sector, especially light-duty  
8 vehicles.

9           The proposed rollback of federal standards, if it  
10 were allowed to stand, would add over 2.5 million metric  
11 tons of greenhouse gas emissions back into Washington's  
12 atmosphere by 2035.

13           As a Section 177 state, Washington relies on the  
14 California Advanced Clean Cars Program to maximize vehicle  
15 emission reductions and drive the development of cleaner  
16 low-carbon transportation sector.

17           Maintaining California's authority to adopt motor  
18 vehicle emission standards and the right for states like  
19 mine to opt into those standards is vitally important to  
20 us.

21           And this is especially critical when the federal  
22 government is unable or unwilling to demonstrate  
23 leadership. Over the years, we have witnessed rapid and  
24 cost effective development of advanced vehicle technology  
25 spurred by California's regulations. Past vehicle

1 standards have been achieved faster and at lower cost than  
2 the experts predicted. And those standards have helped  
3 consumers by delivering cleaner more efficient vehicles.

4 We strongly support the amendments under  
5 consideration by the Board today that clarify and preserve  
6 the original indent of the "deemed to comply" provisions.  
7 California's affirmative action on these standards will  
8 help keep American position to lead the world in efficient  
9 vehicle technology.

10 And Washington is already moving to align our  
11 regulations with your proposed changes, so we can use  
12 these powerful tools to get the cleanest cars responsible  
13 on the road, and continue our progress on clean air, and  
14 our fight against climate change.

15 Thank you for the opportunity to speak with you  
16 again today and testify. CARB's long history of mobile  
17 source leadership inspires us to reach higher and move  
18 faster.

19 On behalf of Governor Inslee, I want to say  
20 Washington stands shoulder to shoulder with you in the  
21 fight to preserve these provisions and to perfect --  
22 protect our communities, our economies, and our  
23 environment.

24 Thank you.

25 CHAIR NICHOLS: Thank you very much. And I can't

1 express really how grateful we are and honored by your  
2 commitment to be here and to support what we're doing. If  
3 there's one short message I take from this, it is that you  
4 need us to take action today in order for you to be able  
5 to do the rulemakings that you all need to do in order to  
6 continue to be in alignment with California?

7 I see the heads nodding, so I just wanted to  
8 summarize that quickly.

9 If there are any questions from members of the  
10 Board?

11 Yes, go ahead.

12 BOARD MEMBER GIOIA: I just have a question. I  
13 appreciate that the presentation included a slide, if you  
14 can put that up, on the risk to public health here in  
15 California from this -- from this federal action. And so  
16 you don't have to do it today, but -- put that slide up  
17 for a second. Can you put the one that said -- it said  
18 was slide 9.

19 Okay. So the -- yeah, so it would be useful --  
20 and I realize you have to make certain assumptions to  
21 provide us. And again, you can do this calculation later,  
22 because I think it's important for us and some of us who  
23 also serve on local air district frankly, were you talk  
24 about the increase -- the additional NOx and some of the  
25 additional emissions that would occur as a result on the

1 increased -- for increased fuel production.

2           And if you could provide a range of what the  
3 additional emissions would be from refineries in  
4 California as a result of this?

5           So if you can work on providing that. Again, not  
6 here today, but -- because it will take some assumption.  
7 And you identified refineries in the Los Angeles area, so  
8 some number for refineries in California.

9           CHAIR NICHOLS: You're addressing this to the  
10 California staff?

11           BOARD MEMBER GIOIA: Yes. Oh, yes. I'm sorry,  
12 yes. This is clearly meant to the California staff. Yes,  
13 not to the --

14           CHAIR NICHOLS: Okay. I had invited questions  
15 of --

16           BOARD MEMBER GIOIA: Yes. I'm sorry. Yes, ont  
17 eh -- on the -- because we heard both presentations.

18           CHAIR NICHOLS: -- for some of the other states  
19 on this.

20           BOARD MEMBER GIOIA: Yeah, right, if you have  
21 that, right.

22           (Laughter.)

23           BOARD MEMBER GIOIA: Probably, you know -- there  
24 would be increased emissions for those refineries in the  
25 State of Washington, right?

1 CHAIR NICHOLS: Right.

2 BOARD MEMBER GIOIA: So you can figure those  
3 numbers. So we can -- I'll just -- you don't have to  
4 respond now, but I really would like to get this  
5 information, especially serving on local air district.

6 Okay. Yeah, I'm not putting you on the spot to  
7 provide it now. And then in the previous slide, you also  
8 said -- you talked about the -- in California, a 12  
9 million metric ton per year loss would wipe out benefits.  
10 So do you have a national number for that as well? That's  
11 a California number, I take it, right? So if you have an  
12 estimate for a California number that -- I mean, a U.S.  
13 number for that. And then getting back to the risk to  
14 public health with -- you know, sort of laying out some  
15 assumptions and range about increased gasoline consumption  
16 and the increased emissions for fuel production.

17 ECARS CHIEF TECHNOLOGY OFFICER McCARTHY: Yeah.  
18 And this is Mike McCarthy. In the national space, the  
19 previous estimate EPA had was about 540 million metric  
20 tons --

21 BOARD MEMBER GIOIA: Okay.

22 ECARS CHIEF TECHNOLOGY OFFICER McCARTHY: -- for  
23 the '22 to '25 standards, Incremental to '21. It's not  
24 exactly what the -- the NPRM actually flatlines early at  
25 2020, so the revised estimate would likely be larger than

1 that 500.

2 BOARD MEMBER GIOIA: Got it. Okay. That gives  
3 me a range. That's all I needed to know, but -- so if you  
4 could work at some point on getting numbers that you could  
5 send out, and -- with regard to emissions --  
6 quantification of emissions increase.

7 CHAIR NICHOLS: Maybe just an update that could  
8 be sent out to all the Board members would be --

9 BOARD MEMBER GIOIA: Yeah, just sent it out to  
10 the whole Board, yeah.

11 CHAIR NICHOLS: -- would be useful.

12 ECARS ADVANCED CLEAN CARS BRANCH CHIEF

13 CUNNINGHAM: Yeah. This is Joshua Cunningham. I'll just  
14 note that we -- we have already determined a general  
15 assessment of the impacts of criteria emissions in the  
16 South Coast Air Basin and statewide. So it might take me  
17 a few minutes to pull this up, but at least we'll be able  
18 to prepare that for you --

19 BOARD MEMBER GIOIA: Great.

20 ECARS ADVANCED CLEAN CARS BRANCH CHIEF

21 CUNNINGHAM: -- quickly after the Board hearing.

22 BOARD MEMBER GIOIA: Thank you very much.

23 CHAIR NICHOLS: Okay. Yes. Everyone would like  
24 to see that.

25 Okay. Ms. Mitchell, did you have your hand up?

1 BOARD MEMBER MITCHELL: No.

2 CHAIR NICHOLS: Oh, I'm sorry. Okay. Any other  
3 questions before we listen to our witnesses?

4 We have 17 witnesses who've signed up to speak on  
5 this item, and then we'll pull it back for some Board  
6 discussion.

7 So lets start with CALSTART.

8 MR. SCHUCHARD: Good morning, Chair Nichols, and  
9 members of the Board. I'm Ryan Schuchard with CALSTART.  
10 We'd like to express our general support for the measure,  
11 while also urging CARB to continue to work towards --  
12 working towards a harmonized approach nationally and  
13 leaving some flexibility for further negotiations to do  
14 that.

15 We do not want to see a reduction in fuel  
16 economy -- federal fuel economy standards, and we  
17 vigorously oppose any action to undermine California's  
18 waiver.

19 And, Chair Nichols, I must say I was proud to  
20 hear you in Fresno on Monday representing us. I thought  
21 you were very eloquent and appreciated you being here.  
22 And when we look at the ARB's proposal, we have no choice  
23 but to agree that the federal administration withdrew its  
24 previous determination without due process and  
25 coordination.

1           So we stand with you on this measure, and we also  
2 ask that you continue to seek ways to make refinements to  
3 the federal standard that can keep within the same  
4 stringency that is so important to California.

5           Thank you very much.

6           CHAIR NICHOLS: Thank you.

7           Dr. Brezny.

8           DR. BREZNY: Good morning, Chair Nichols and  
9 Board members. And thank you for this opportunity to  
10 provide comments today.

11           I'm Rasto Brezny, the Executive Director for the  
12 Manufacturers of Emission Controls Association. MECA  
13 represents the world's leading manufacturers of mobile  
14 emission control and GHG technologies, including the full  
15 complement of technology for electric and electrified  
16 vehicles. Our members are part of the nearly 300,000  
17 North American jobs in the clean vehicle industry that  
18 wouldn't exist if it wasn't for performance-based  
19 regulations that drive innovation.

20           We believe that the best hope for a successful  
21 long-lasting vehicle GHG reduction program is founded on a  
22 negotiated set of standards between California, NHTSA, and  
23 EPA, with increasing year-over-year stringency that allows  
24 California and Section 177 states to achieve their air  
25 quality and climate goals, and the federal agencies to

1 meet their statutory requirements.

2           A negotiated program further eliminates the  
3 uncertainty caused by protracted litigation. For over 42  
4 years, MECA has supported every -- every waiver request  
5 made by California, including this one in 2012, because  
6 California's authority has been critical in driving  
7 innovation in our industry.

8           For over 50 years, California has played a  
9 leadership role in advancing vehicle standards and air  
10 quality policy that created a market for clean vehicle  
11 technologies, first in California, then in the U.S., and  
12 eventually around the world.

13           This is a successful model where California acts  
14 as a laboratory for new technology and policy that allows  
15 manufacturers to gain experience that benefit the rest of  
16 the nation.

17           Therefore, MECA supports California's waiver, and  
18 the state's role as co-regulator of mobile source  
19 emissions. A few days ago in Fresno, I spoke about the  
20 detrimental impact on our industry from a long period of  
21 regulatory stagnation. And therefore, we urge CARB to  
22 work towards a negotiated unified vehicle program that  
23 continues to reduce GHGs.

24           In the event that an agreement cannot be reached,  
25 we recognize that CARB must take the necessary measures to

1 address the air quality for the citizens of California.

2           If light of this, we ask ARB to consider measures  
3 and flexibilities to further advance the pace of  
4 innovation, including a supplier-based off-cycle credit  
5 program that addresses GHG reductions by all  
6 technologically feasible and verifiable means.

7           In closing, MECA members are committed to provide  
8 the technology solutions to help California meet its  
9 climate and air quality goals.

10           Thank you.

11           CHAIR NICHOLS: Thank you.

12           Mr. Douglas.

13           MR. DOUGLAS: Thank you, Chair Nichols, members  
14 of the Board. I'm Steve Douglas with the Alliance of  
15 Automobile Manufacturers representing 12 of the world's  
16 leading car companies, or about 70 percent of the new  
17 vehicle market.

18           So first, I'd like to just remind the Board of  
19 the Alliance and our members' position on this. First,  
20 the Alliance actively supports one national program with  
21 regulations that cover all 50 states negotiated between  
22 ARB, EPA, and NHTSA.

23           Second, we support continued improvements in fuel  
24 economy and greenhouse gas standards, and recog -- and  
25 that recognize the marketplace realities, so that balance

1 between the standards and the market.

2           And finally, we support continued and expanded  
3 incentives for advanced technologies like electrification  
4 that are really critical for California to meet it's  
5 long-term greenhouse gas goals.

6           We've made the position clear to the media, to --  
7 in Congressional testimony, in meetings with the President  
8 and the White House, and, of course, in meetings request  
9 ARB, EPA, and NHTSA.

10           We are optimistic, or at least hopeful, that  
11 continued dialogue can and enable all of the stakeholders  
12 to find a common ground to continue the one national  
13 program. Consequently, we recommend the Board defer a  
14 decision on this item, and instead direct staff to  
15 continue working with their federal counterparts,  
16 automakers, and other stakeholders to develop consensus  
17 regulatory changes that will meet your statutory mandates  
18 to protect public health, welfare, and the environment,  
19 while considering the national implications of any  
20 decision, including what a split in the program would mean  
21 overall for greenhouse gas emissions.

22           If, however, you approve this and the "deemed to  
23 comply" provision is approved, either now or in a future  
24 rulemaking, ARB would need to modify its greenhouse gas  
25 regulations to deal with various issues that need to be

1 addressed when we go from meeting one program nationwide  
2 to meeting two separate programs.

3 We've outlined a lot of those issues in our  
4 written comments, but a lot more work is going to be  
5 needed between automakers and ARB staff. Again, I'd like  
6 to thank you for your time, and I'd be happy to answer any  
7 questions.

8 MS. REGE: Good morning, Chair Nichols, members  
9 of the Board. I'm Julie Rege with the Association of  
10 Global Automakers. Global Automakers represents the U.S.  
11 operations of international automobile makers, suppliers,  
12 and other trade-related associations. We represent 56  
13 percent of the new vehicle sales in the state and over 50  
14 percent of the new green vehicle sales in this state.

15 It's been another big week in California,  
16 starting off with the kick-off of federal public hearings  
17 on CAFE and GHG proposal in Fresno, and now with today's  
18 consideration of the amendments to "deemed to comply".

19 I appreciate the opportunity to provide these  
20 comments on these important issues. And the reality is  
21 our message has been the same in both forums. Global  
22 Automakers wants a national program that includes  
23 California. This best serves American customers in this  
24 State and throughout the nation, as well as the  
25 environment throughout the nation.

1           It provides a smart efficient policy for  
2 improving fuel efficiency and greenhouse gases. And we  
3 want to continue to build on the progress we've made to  
4 date. We've been advocating for a national program with  
5 meaningful and steady annual improvements in fuel  
6 efficiency.

7           We also believe the federal program needs to  
8 support compliance flexibility. For example, credits,  
9 air-conditioner improvement, and off-cycle technologies,  
10 all of which reflect real-world benefits, and importantly  
11 policy levers that encourage innovation and investment in  
12 advanced technology. These latter elements, like  
13 multipliers and zero grams per mile upstream, are critical  
14 for transition to ultra low carbon transportation across  
15 the country.

16           We believe that a unified program is achievable,  
17 and it's critical that California and the federal  
18 government put aside differences and recommit to a  
19 national program.

20           Global automakers much prefers the path of  
21 coordination to years of uncertainty and litigation on  
22 preemption and waivers.

23           And so as it relates to "deemed to comply", we  
24 request that the Board defer action today. We understand  
25 ARB can issue amendments again, if needed, but we believe

1 the better approach is to wait and see how federal  
2 discussions play out, the outcome of which is very  
3 uncertain at this time.

4           Should discussions fail to reach a desired  
5 outcome in the end, ARB can then alter "deemed to comply",  
6 and seek the required waiver for that amendment. In  
7 addition, in our written comments, we detail a number of  
8 issues with ARB's regulations that are on the books. We  
9 believe additional amendments are needed, as well as  
10 consideration of alternatives, and that this will help  
11 make sure the regulations can be implemented in an  
12 efficient manner and will be feasible across California  
13 and the states that follow California. Global Automakers  
14 is committed to working with ARB on these concerns.

15           In summary, Global Automakers believes ARB  
16 should, first, work cooperatively with the federal  
17 agencies to find the right national solution; second,  
18 defer action on today's proposed amendment until we can  
19 determine whether a resolution with the federal agencies  
20 is attainable.

21           And third, if ARB ultimately revokes the "Deemed  
22 to comply" provision, make the necessary regulatory  
23 adjustments to make California's program feasible.

24           Thank you.

25           CHAIR NICHOLS: Thank you.

1 MR. ZALZAL: Good morning, Chair Nichols and  
2 members of the Board. My name is Peter Zalzal. And I'm  
3 here today on behalf the Environmental Defense Fund in  
4 strong support of California's advanced clean cars  
5 standards that are vital to safeguard the health and  
6 well-being of millions of people across the Golden State.

7 For over 50 years, California has been a leader  
8 in establishing air pollution standards for motor vehicles  
9 that are protective of human health, while paving the way  
10 for more than 12 states to do the same.

11 There's no question that California now, as much  
12 as ever, continues to need these important standards to  
13 reduce climate de-stabilizing and health harming pollution  
14 from cars and trucks.

15 Indeed, California is experiencing severe and  
16 tragic weather events exacerbated by climate change,  
17 including drought, flooding and wildfires. And the State  
18 is home to 19 of the 25 most ozone-polluted counties.

19 And there's an overwhelming body of evidence  
20 documenting the feasibility and cost effectiveness of the  
21 Advanced Clean Car program that the Board has just  
22 reaffirmed in a transparent and rigorous process last  
23 year.

24 It's equally clear that the "deemed to comply"  
25 provision today before the Board was intended, when

1 adopted, to provide a compliance flexibility that would  
2 nevertheless ensure the achievement of the pollution  
3 reductions promised by the federal clean cars standards  
4 currently in effect and by the California Advanced Clean  
5 Car program.

6 For instance, a July 2011 CARB commitment letter  
7 clearly states this compliance flexibility applies only to  
8 quote, "The greenhouse gas emission standards adopted by  
9 EPA for those model years that are substantially as  
10 described in the July 2011 notice of intent, even if  
11 amended after 2012".

12 These and many other statements make clear that  
13 the "deemed to comply" provision was meant to operate only  
14 if future amendments to the federal standards retain the  
15 protectiveness of the program. Any other understanding is  
16 flatly inconsistent with this history and California's  
17 long-standing important and independent role in adopting  
18 protective clean car standards.

19 The Board is now considering amendments to  
20 reaffirm this long-standing understanding of the "deemed  
21 to comply" provision. In doing so, EDF likewise supports  
22 the Board's efforts to make any such changes contingent on  
23 the federal government finalizing a rule to weaken its  
24 clean car standards, such that should NHTSA and EPA  
25 abandon their fundamentally misguided attacks on

1 California's Advanced Clean Car program and on the public  
2 health and welfare of all Americans, there is no need for  
3 the clarification.

4 We greatly appreciate the opportunity to provide  
5 testimony at today's hearing and underscore EDF's strong  
6 support for the Board's efforts to ensure that all  
7 Californians will continue to benefit from the critical  
8 pollution reductions that the Advanced Clean Car program  
9 will deliver.

10 Thank you.

11 CHAIR NICHOLS: Thank you.

12 MS. GUTIERREZ: Good morning. My name is Irene  
13 Gutierrez and I'm a staff attorney at the Natural  
14 Resources Defense Council. I'm here today representing  
15 NRDC's more than three million members and activists who  
16 fight to uphold access to clean air, clean water and a  
17 healthy planet.

18 First, I want to thank Chair Nichols and the  
19 Board members for their strong leadership in the face of  
20 federal threats to clean car standards. I attended the  
21 Fresno hearing earlier this week, and I appreciated the  
22 presence and leadership of the California delegation, and  
23 the strong statements that they made in support of our  
24 clean cars standards.

25 Rolling back federal standards makes no sense in

1 practical or a legal manner. Further, there is no factual  
2 or legal basis for EPA to take away California's authority  
3 to move forward with its own program.

4 NRDC supports strong clean car standards at the  
5 federal and state level, and supports California's efforts  
6 to continue making progress. We've submitted comments  
7 supporting ARB's proposed actions here, and I'll summarize  
8 them today.

9 While we support ARB clarifying its regulation,  
10 we do not think that a clarifying change is necessary.  
11 The record leading up to the codification of the "deemed  
12 to comply" provision is clear, and it shows that  
13 California only intended to accept compliance with federal  
14 standards, only as long as those standards remained as  
15 strong as California's.

16 Further, it makes no practical sense for  
17 California to accept compliance with weaker standards.  
18 For decades, California has led the way in requiring  
19 automakers to design cars that protect individuals, the  
20 environment and the climate. Congress explicitly  
21 recognized this authority decades ago.

22 In light of its long-standing congressionally-  
23 recognized authority to be an innovator and a leader, it  
24 makes no sense to have in place a regulation that defeats  
25 that authority of California.

1           Traveling to Fresno this week really brought home  
2 the point that now, more than ever, we need California's  
3 leadership on clean cars. We heard that day from many  
4 residents of Fresno, as well as physicians and other  
5 activists in the area about the air quality issues that  
6 they're suffering and the climate issues that they're  
7 suffering.

8           The rest of the state continues to suffer from  
9 air pollution, heat, waves wildfires and other effects of  
10 climate change. So we support the actions that California  
11 is taking today to maintain its leadership role.

12           Thank you.

13           CHAIR NICHOLS: Thank you.

14           MR. ANAIR: Good morning -- excuse me. Good  
15 morning Chair Nichols, members of the Board. My name is  
16 Don Anair. I'm the research and deputy director in the  
17 clean vehicles program with the Union of Concerned  
18 Scientists. I'm here today to support the proposed  
19 amendments, as it's imperative that California and the  
20 other clean car states continue to move forward in  
21 reducing pollution from our transportation sector in our  
22 cars -- in our new cars and trucks.

23           To date, UC estimates that the standards have  
24 reduced more than 27 million metric tons alone in  
25 California. They've also saved California consumers more

1 than \$7 billion at the gas pump, and by 2030 will save the  
2 average household in California more than \$3,500.

3 The mid-term evaluation carried out by ARB staff  
4 and heard by this Board last year clearly was conclusive  
5 in determining that these standards are feasible,  
6 affordable, and necessary to reduce pollution from our  
7 cars and trucks.

8 We sincerely hope The federal administration will  
9 listen to the overwhelming rejection of their proposed  
10 standards at the three hearings this week across -- held  
11 across the country. However, it is critical that  
12 California and the other states continue to move forward  
13 despite what U.S. EPA and the Department of Transportation  
14 decide to do.

15 We believe the proposed language is consistent  
16 with the original intent as adopted in 2012, and I urge  
17 the Board to take action today.

18 Thank you.

19 CHAIR NICHOLS: Thank you.

20 MR. KINSEY: Good morning, Chairman Nichols,  
21 members of the Board. My name is Kathy Kinsey. I'm a  
22 senior policy advice or with the Northern East States for  
23 Coordinate Air Use Management or NESCAUM. NESCAUM is a  
24 regional association of the six New England states, the  
25 air pollution control agencies in the six New England

1 states and New Jersey and New York.

2           And I'm here today to echo the comments of the  
3 state speakers that you heard from earlier this morning,  
4 to speak in strong support of staff's proposed amendments,  
5 but also more broadly in support of California's authority  
6 under the Clean Air Act to regulate motor vehicle  
7 emissions, and it's long history of environmental  
8 leadership, particularly with respect to the  
9 transportation sector from which both our states and the  
10 nation as a whole have greatly benefited.

11           As you know, seven of the NESCAUM states have  
12 exercised their authority under Section 177 of the Clean  
13 Air Act to adopt the California motor vehicle emissions  
14 standards. Many of them actually did so decades ago.

15           Adoption of the California program has resulted  
16 in all of our states in improved air quality and improved  
17 public health outcomes. And importantly, the California  
18 rules have established the basis for a much more effective  
19 federal regulations.

20           We strongly oppose any effort to rescind  
21 California's existing waiver or curtail California's  
22 authority, or the authority of the Section 177 states to  
23 adopt more stringent greenhouse gas emission standards for  
24 motor vehicle emissions.

25           NESCAUM supports the proposed amendments to the

1 LEV III regulation. These amendments simply clarify that  
2 the "deemed to comply" provision only applies to currently  
3 adopted federal standards. This is consistent with the  
4 original intent and will ensure that the emission benefits  
5 of California's program are not lost to our states in the  
6 event that the federal standards are ultimately weakened.

7 Our states have successfully defended their right  
8 to adopt and implement the California light-duty vehicle  
9 standards in the past. And if history is to repeat itself  
10 again, NESCAUM is fully committed to working with the  
11 Section 177 states and with California to ensure the  
12 preservation of our state authority under the Clean Air  
13 Act.

14 Finally, I would just like to thank California  
15 and the Air Resources Board for your national and your  
16 international leadership and your pioneering efforts to  
17 protect the environment and public health from motor  
18 vehicle pollution.

19 We have all benefited tremendously from that  
20 leadership. Thank you very much for the opportunity to  
21 speak to you here today.

22 CHAIR NICHOLS: Thank you.

23 MR. NOYES: Good morning, Chair Nichols, members  
24 of the Board. Very much appreciate the opportunity to be  
25 here today. Graham Noyes, Noyes Law Corporation on behalf

1 of the Pearson Fuels. Pearson is the largest supplier of  
2 E-85 fuel in California to flex-fueled vehicles.

3 As with many folks in the room, I started the  
4 week this week with a very early drive down to Fresno,  
5 appreciated the fabulous job done by the California panel,  
6 and think that Chair Nichols had perhaps the best line,  
7 Nothing safe about the SAFE Rule. And that's  
8 absolutely -- absolutely the case, in terms of the rule  
9 itself.

10 The additional point that I would make is that  
11 there's nothing safe for California's policies, including  
12 our greenhouse gas policies, our criteria pollutant  
13 policies, our compliance with the State Implementation  
14 Plan, and our market-based policies with a litigation  
15 course. And from my perspective, and others that I've  
16 spoken with, that's the course that we're on right now,  
17 which will -- whatever the ultimate course and whether we  
18 are correct in all our legal positions or not will result  
19 in years of uncertainty, will result in setbacks to our  
20 programs because of that uncertainty, will result in  
21 tremendous resource dedication to the wrong things. And  
22 so from our perspective, the best possible solution here  
23 is a negotiated solution.

24 I think the good news, in terms of the  
25 negotiation, is that there's nothing safe for the

1 automakers in this years of -- in years of litigation  
2 either. They clearly are supportive and have made it on  
3 the record that they're willing to see increases in  
4 standards. That's consistent with the technologies  
5 they're bringing into play, and also where the rest of the  
6 world is going. The bad news is it does appear safe for  
7 this federal administration to have this fight with  
8 California. It seems that this federal administration is  
9 particularly -- is actually looking forward to this fight.

10 So California needs to look for solutions in  
11 compliance flexibilities. We need big multipliers for  
12 ZEVs. We need other flexibilities that are on the list  
13 from the automakers and from MECA, and we need to  
14 recognize the benefits of biofuels.

15 Biofuels have been delivering about 90 percent of  
16 the greenhouse gas reductions in the Low Carbon Fuel  
17 Standard to date, about 10 times what we've seen from the  
18 EVs thus far. They provide real-world greenhouse gas  
19 benefits and criteria pollutant reductions. They also  
20 provide policy support and political support in terms of  
21 bringing on much of the U.S. Senate that can help with  
22 this administration. Frankly, the autos need to get this  
23 deal done with the -- with California in 2018 and take  
24 that back to the administration and get the deal done with  
25 the federal administration in early 2019 for us to achieve

1 an outcome.

2           If I could address specifically the point raised  
3 in the letter Chair Nichols around the timing of this  
4 briefly.

5           CHAIR NICHOLS: All right.

6           MR. NOYES: In the letter submitted for today's  
7 proceeding, we took the position that a delay made sense  
8 in terms of the approval of the "deemed to compliance".  
9 The key point for that was really to keep this very much  
10 at the top of everyone's list, and to dedicate the  
11 necessary staff resources and to tremendous focus on this  
12 in 2018 to facilitate the CARB automaker negotiations that  
13 certainly need to -- need to apply.

14           Very much heard the comments of the Section 177  
15 states that were well put here as to how this fits in the  
16 legal framework. So our position, this is really a  
17 tactical issue when the Board does this, and so that would  
18 not be the focus of our comments. It's really about  
19 facilitating compliance, flexibility, negotiation.

20           Thank you.

21           CHAIR NICHOLS: Well, I was going to make a  
22 comment later about all the helpful advice we were getting  
23 about exactly how to negotiate, but you've already done  
24 that. So thank you.

25           (Laughter.)

1 MR. NOYES: Thank you.

2 CHAIR NICHOLS: Thank you.

3 Okay. Mr. Bienenfeld, there you are.

4 MR. BIENENFELD: Here I am. Chair Nichols, Vice  
5 Chair Berg and members of the Board, I'm Robert  
6 Bienenfeld, assistant vice president, American Honda Motor  
7 Company. Thank you for the opportunity to comment on  
8 these proposed "deemed to comply" amendments.

9 Honda supports our trade association Global  
10 Automakers' comments on these amendments. We urge  
11 California to work with the federal government to achieve  
12 national standards that preserve a coast-to-coast  
13 efficient market, a national market for automobiles,  
14 achieve greater greenhouse gas reductions than could be  
15 possible through the efforts of California and the 177  
16 states alone, and preserve California's right to regulate.

17 These are important outcomes from negotiated  
18 national standards. We believe the adoption of these  
19 amendments is premature and unhelpful while negotiations  
20 are underway. A Board member recently said we can easily  
21 change the regulations if a deal is reached.

22 Yet, this claim belies the political nature of  
23 the action. If this is, of course, easily reversed, then  
24 it is just as easily postponed for a few months.

25 We are a country riven more by symbolism than by

1 substance, and action today is evidence of this. We  
2 believe the amendments will have unintended consequences.  
3 As proposed, it will remove "deemed to comply" even if  
4 California and the federal government reach agreement.  
5 And if no agreement is reached, the amendment will  
6 activated California's dormant GHG regulation that is  
7 unworkable as written.

8 Another option should be considered by this  
9 Board. In the unlikely event that ARB and the federal  
10 government are unable to reach an agreement, we believe  
11 the Board should direct staff to study and develop a  
12 supplemental voluntary program that is complementary to  
13 the existing program. A supplemental program could  
14 include flexibilities, a relaxed standard, which, if  
15 followed by even one automaker, would have salutary  
16 effects, such as maintain -- maintaining the efficient  
17 national market and reduced GHG more than just if  
18 California and 177 states followed this by themselves.

19 So, in conclusion, that's what we would like to  
20 see the Board direct staff to do.

21 Thank you very much.

22 CHAIR NICHOLS: Thank you.

23 MR. MILLER: Good morning, Chair Nichols and  
24 Board members. My name is Chris Miller. I'm the  
25 executive director of the Advanced Engines Systems

1 Institute. AESI is trade and advocacy association of  
2 companies that are developed -- committed to developing  
3 and deploying innovative technologies to reduce the  
4 environmental footprint of today's cars, trucks, and  
5 mobile sources. Our members have worked with EPA, ARB,  
6 and our customers, the automakers, for more than 40 years  
7 to product cutting-edge solutions to air pollution  
8 problems that dangerously impact public health and the  
9 environment.

10 Over that period, our industry has helped achieve  
11 massive emissions reductions while the economy grew  
12 tremendously. Our industry has grown too. Now, there are  
13 more than 300,000 people that are working directly in  
14 developing and deploying clean vehicle technology in at  
15 least 34 states.

16 California's leadership has made much of this  
17 progress possible. California's efforts to combat mobile  
18 source air pollution have led to national standards that  
19 have attracted investment, R&D dollars, and intellectual  
20 capital from around the world. We hope and intend to help  
21 California, the Section 177 states, and the federal  
22 government, if they're interested, expand on that solid  
23 record of accomplishment over the next 40 years.

24 Our industry relies heavily on the regulatory  
25 certainty. We need it to make sound business decisions on

1 our long term R&D investments. However, the regulatory  
2 process, since the jointly developed TAR was completed,  
3 has been less than certain to put it mildly. We do not  
4 support the administration's preferred alternative in the  
5 NPRM. We do not support a revocation of the existing  
6 Clean Cars Program waiver.

7 Flatlining the standards and disrupting rational  
8 regulatory processes will cost jobs and chill investment  
9 in our industry.

10 The proposal alone is already encouraging some  
11 companies to defer new job-creating investments or to  
12 actively consider shifting their investments to all -- to  
13 other countries that are more serious altogether. We  
14 strongly prefer one national program, and have set that  
15 out as one of the core principles of a new and broad  
16 coalition of automotive supplier groups known as the  
17 automotive -- or excuse me, the Advanced Technology  
18 Leadership Group.

19 AESI ports California's efforts and those in the  
20 Section 177 states to address their and this nation's  
21 serious environmental and public health challenges,  
22 whether that occurs through amending the "deemed to  
23 comply" provision today or by other means in the near  
24 future. It is our strong hope that California, NHTSA, and  
25 EPA will produce a constructive path forward very soon,

1 and one that continues U.S. global leadership on climate  
2 change and air quality.

3 Thank you.

4 CHAIR NICHOLS: Thank you.

5 MR. BARRETT: Good morning. I'm Will Barrett the  
6 American Lung Association in California. In brief, the  
7 American Lung Association supports this amendment to  
8 clarify that compliance with current health protective  
9 federal rules will meet California carbon emission  
10 requirements. There is really no rational basis to think  
11 that CARB intended anything other than to allow and  
12 accept compliance with the existing stringent federal  
13 standards, as opposed to less protective proposed rules.

14 If this clarification is needed to provide  
15 rational guidance as the federal government considers this  
16 senseless proposal to rollback health protective  
17 standards, we support CARB moving forward today and  
18 encourage all the 177 states to take action as quickly as  
19 possible.

20 The Lung Association is adamantly opposed to the  
21 joint U.S. EPA and NHTSA proposal to weaken our existing  
22 clean air car standards and strip state authority to  
23 protect the health of our citizens.

24 Our staff volunteers, help professional  
25 volunteers made this very clear at hearings across the

1 country this very week. By design, the federal proposals  
2 would increase harmful pollutants, threaten public health,  
3 and burden communities already most impacted by toxic air  
4 emissions from the petroleum supply chain.

5 We support CARB making this clarification today  
6 in the best interests of public health, clean air, and a  
7 stable climate.

8 Thank you very much.

9 CHAIR NICHOLS: Thank you.

10 MR. RANCHOD: Good Nichols and Members of the  
11 Board. Sanjay Ranchod with Tesla. Thank you for the  
12 opportunity to provide comments here today in support of  
13 this item.

14 Tesla has a mission, the mission is to accelerate  
15 world's transition to sustainable energy. All Tesla  
16 vehicles are zero emission, and assembled here in  
17 California. Our vehicles help to reduce the emissions of  
18 harmful air pollutants in communities across California.  
19 And we share the state's air quality, clean  
20 transportation, and climate goals.

21 Unlike other automakers, we do not believe the  
22 proposed amendments are premature. Tesla strongly  
23 supports ARB's efforts to maintain the stability and  
24 stringency of the LEV III greenhouse gas emission  
25 standards, the continued regulatory stability for auto

1 manufacturers embodied in the current federal and state  
2 light-duty greenhouse gas vehicle standards, and the  
3 "deemed to comply" regulation is important.

4           It has helped contribute to billions of dollars  
5 of investment by Tesla in this country. And Tesla has  
6 become one of the largest manufacturing employers in the  
7 state of California with more than 20,000 workers.

8           There's no question that California has a  
9 continued need to address the impacts of air pollution on  
10 the state's residents. The level of protection  
11 established by the "deemed to comply" provision, and the  
12 existing U.S. EPA greenhouse gas light-duty standards  
13 remains a necessary minimum.

14           Allowing for the "deemed to comply" regulation to  
15 encompass new regulations that diminish this level of  
16 needed public health protection would be wrong and result  
17 in ARB running afoul of statutory requirements. ARB  
18 should ensure that any amendment to the "deemed to comply"  
19 regulation is durable enough to ensure that a recognition  
20 of federal equivalency will occur only when the current  
21 levels of greenhouse gas emission reductions are  
22 maintained or one-day strengthened.

23           Tesla believes the ARB proposal could be refined  
24 to make the "deemed to comply" authority flexible enough  
25 without requiring ARB to undertake additional regulatory

1 amendments in the event the federal program should be  
2 altered in a way that maintains or increases its  
3 stringency. This could be achieved by amending section  
4 1961.3(c) as described in the written comments that we  
5 submitted earlier this week.

6 Existing standards are achievable through readily  
7 available technologies, and at lower cost than anticipated  
8 in the 2012 joint rulemaking. Therefore, Tesla strongly  
9 supports ARB's efforts to maintain the stability and  
10 stringency of the LEV III greenhouse gas emission  
11 standards.

12 Thank you.

13 CHAIR NICHOLS: Thank you.

14 MS. MCGHEE: Good morning. SDAP in general is  
15 supportive. However, there are concerns relating to  
16 fleets that do require all technologies to have  
17 certification. Regulatory standards impact the market.  
18 CARB and EPA are regulators of our vehicle's tailpipe  
19 emissions and fuel economy standards. However, neither of  
20 these two agencies regulate vehicle performance with zero  
21 tailpipe emissions technology, including useful duration,  
22 onboard diagnostics, vehicle labeling, fuel economy,  
23 warranty, and garage service stations to be available to  
24 diagnose malfunctions of vehicles that are 100 percent  
25 proprietary, penalties and enforcement for vehicle

1 repairs, defect reporting, durability and performance  
2 certification testing.

3 In fact, all heavy-duty ZEVs have no  
4 certification requirement. ZEVs in the medium- and  
5 heavy-duty sector have no standards. The HVIP ZEV voucher  
6 program began in 2009 and we've sold 575 vouchers with 65  
7 percent of these vehicles cannibalized due to the OEMs no  
8 longer in business. This leaves California with 210 ZEV  
9 vehicles in the HVIP program with \$33 million spent.

10 The ZEV Program requires actions to ensure these  
11 vehicles a safe. It is not reasonable based on existing  
12 lesson learned to not create a certification program that  
13 protects against new issues in this technology.

14 Commercially registered fleet vehicles have no  
15 lemon law, thereby commercial motor carriers have  
16 operational duty to protect the public when in transport  
17 and the highways or roadways while mobile. It is our  
18 motor carrier license requirement to operate safely.

19 Endangering the public health and welfare can  
20 reasonable be determined with more emissions, but so can  
21 unsafe vehicles that have no standards for robustness,  
22 durability, performance under heavy wear and tear vehicle  
23 miles traveled by commercial operators that run 10 plus  
24 hours a day.

25 It is appropriate to find a regulatory process to

1 ensure this technology is safe, affordable and feasible.  
2 We have no regulation with ZEV technology to appropriately  
3 have an average fuel economy and efficiency standard  
4 without the same considerations to control and improve the  
5 technology. This would illustrate that the economy of  
6 fuel and control of reducing emissions from  
7 grid-dispensing technology could increase CI and could  
8 also cost fleets and consumers more than CAFE regulated  
9 technology.

10           Fleets value fuel economy far beyond  
11 commercial -- consumer purchased vehicles. Without  
12 technology confidence and durability useful life standards  
13 that equal 100,000 plus miles, the same as in other  
14 technologies, fleets will compare the standards and  
15 reliability. Fleets will stay in older and dirty  
16 vehicles. This is a direct consequence. Older vehicles  
17 are not safe, and older vehicles create more emissions.

18           The Clean Air Act ZEV technology requires setting  
19 standard and maximizing the potential of zero emitting  
20 technologies to be fuel efficient, to enable -- should  
21 enable co-chairing to diagnose malfunctions and create a  
22 remedy and enforcement procedures to make sure these  
23 vehicles can stay on the road for the same useful life as  
24 conventionally-fueled vehicles.

25           This will eliminate two different regulatory

1 requirements for zero-emission vehicles and other  
2 technologies. The cost --

3 CHAIR NICHOLS: Excuse me. Your time is up.

4 MS. MCGHEE: Oh. Okay. Thank you.

5 CHAIR NICHOLS: Could I just ask a question,  
6 because I was just searching to see if you had submitted a  
7 letter or any written testimony. I'm not familiar with  
8 SDAP.

9 MS. MCGHEE: Oh, I'm sorry. We're a small fleet  
10 operational vehicle in San Diego at the San Diego Air  
11 Part.

12 CHAIR NICHOLS: Oh. Okay. And are you here  
13 primarily with respect to the ZEV bus item then as opposed  
14 to the federal coordination --

15 MS. MCGHEE: No, act --

16 CHAIR NICHOLS: -- or both? It does -- I was  
17 trying to figure it out.

18 MS. MCGHEE: Actually really it would be both  
19 would be the answer.

20 CHAIR NICHOLS: Okay. All right. Thank you.

21 MS. MCGHEE: Thank you.

22 CHAIR NICHOLS: Appreciate that.

23 Mr. Magavern.

24 MR. MAGAVERN: Good morning. Bill Magavern with  
25 the Coalition for Clean Air.

1           We were one of the original sponsors of Fran  
2 Pavley's clean cars bill back in 2001. It was enacted  
3 into law the following year. And since then, this Board  
4 has done an excellent job of implementing it, despite  
5 obstruction tactics from first the Bush administration and  
6 now the Trump administration.

7           So we fully support the proposal before you  
8 today, because it would continue the current standards,  
9 which are based on science, and fact, and technological  
10 feasibility. They continue to be more than feasible as  
11 determined by the National Academy of Sciences Report.  
12 And they've been delivering benefits for our health, for  
13 our climate, and for consumers.

14           The Trump administration proposal, on the other  
15 hand, ignores scientific fact, technological fact, ignores  
16 the benefits for consumers, and for our health, and for  
17 our climate. And, in fact, I want to -- as native New  
18 Yorker, I want to thank Mr. Snyder for summing up that  
19 proposal in three words, illegal, irresponsible, and  
20 immoral.

21           The proposal is so backward and unpopular, that  
22 even the auto companies aren't really thrilled with it,  
23 which leaves you to wonder this is being done to benefit  
24 whom? And the only answer I can come up with is the oil  
25 companies, who are, of course, the allies and donors of

1 the Trump administration.

2           So this proposal seems designed to allow for, to  
3 facilitate the additional use of oil in our vehicles,  
4 which is against every policy that every previous  
5 administration has had for the United States. So really,  
6 I think the only beneficiaries would be the oil companies.

7           So I don't have any negotiating advice for you  
8 this morning. I'm just here to offer our strong support  
9 as you go forward, and to let you know that the breathers  
10 of California are with you.

11           CHAIR NICHOLS: Thank you.

12           MR. KOLODJI: Chair Nichols, Board Members and  
13 the world, my name is Brian Kolodji, Black Swan. And I am  
14 a chemical -- a professional chemical engineer in the  
15 state of California for -- with over 40 years of  
16 experience in the energy industry, and the 2018 American  
17 Institute of Chemical Engineers Carbon Management  
18 Sustainability Session Chair.

19           I add my breath and support to this measure  
20 before the Board. California must lead for the U.S. and  
21 for the world to help gasoline-fueled vehicles, all  
22 vehicles, as well as all -- as well as associated gasoline  
23 production go the way of the buggy and its horse.

24           It is time -- it is time now, and we are running  
25 out of time, as emphasized by Governor Brown's recent and

1 historic Executive Order -- I have a copy here, if anybody  
2 wants to see it -- Executive Order B-55-18, to achieve  
3 California -- to accelerate California to carbon  
4 neutrality by 2045. Without zero-emission vehicles,  
5 almost one half of the world's 15 gigatons, that's 15  
6 gigantic billion tons of greenhouse gas, in the form of  
7 carbon dioxide from gasoline fueled vehicles and  
8 refineries, cannot be removed to arrest and start the  
9 reduction of the 300 parts per million -- to the 300 part  
10 per million level of CO2 which is now over 400 parts per  
11 million, a level not achieved in over a million years,  
12 okay, and seen -- and seen for over a million years,  
13 almost -- okay.

14 So I'm a minute ahead of time. I'm stopping now.

15 (Laughter.)

16 CHAIR NICHOLS: Well, you feel very strongly  
17 about this. We appreciate your support. Thank you.

18 Mr. Weiskopf.

19 MR. WEISKOPF: Good morning, Chair Nichols,  
20 members of the Board. I'll be brief. Thank you for very  
21 much for your ongoing and past efforts on this rule in  
22 negotiating with really extreme patience with the federal  
23 government on this.

24 I know a number of folks have expressed a desire  
25 for certainty and flexibility, and one national standard.

1 The good news is we have all three. I thank you for the  
2 clarification to the existing rule to maintain what is a  
3 thoroughly negotiated and highly achievable very  
4 reasonable standard. I urge you to adopt the  
5 clarification today.

6 Thanks very much.

7 CHAIR NICHOLS: Okay. Thank you.

8 That concludes the list of witnesses that I have.  
9 So I can close the record and proceed to a discussion by  
10 the Board.

11 I think it might be useful just to say a word or  
12 two about where we are. This is, to some extent, is  
13 duplicating what the staff presentation already covered,  
14 as well as our fellow states. But we don't really see any  
15 reason why there needed to be a change in the existing  
16 standards at all. And when the previous administrator of  
17 U.S. EPA came in and reversed the findings that had  
18 already been done, we objected vehemently. And when they  
19 took action to then announce that there was going to be a  
20 need to move forward with a new set of standards, we filed  
21 lawsuits. So there is -- there is litigation at the  
22 moment already underway on this exact set of issues.  
23 Although, it's, at the moment, not active. Briefs have  
24 been filed, but there's nothing happening.

25 So then the question is, okay, what do we -- what

1 do we do now in the face of a proposal that came out in  
2 August, which is dramatically worse than what we had been  
3 led to expect, and was the product of a very closed  
4 process, in which unlike the previous negotiations that  
5 led to the existing standards, California played no role.  
6 That is, we were repeatedly told that we would be allowed  
7 to look at the federal government's data and to discuss  
8 with them what the changes were, if there were going to be  
9 change proposed, and that never happened. So prior to  
10 August, although there were meetings, there was, in fact,  
11 no exchange of data that happened at all.

12           So now the proposal is out, and there's been a  
13 new series of discussions activated. And we have been  
14 told, I don't think there's anything at all secret about  
15 this, that the President told his administration, his  
16 agencies that he would like to see a negotiated settlement  
17 with California of some kind, along the lines of what  
18 they've have proposed.

19           Well, the proposal is to -- is to preempt  
20 California completely, and then to either freeze, or some  
21 minor variations of a freeze, the standards that are --  
22 that are in effect today.

23           And so we're really not in a position to  
24 negotiate around that proposal. And we have, of course, a  
25 third party in all of this in a sense, which is not a

1 governmental party, but the -- but the auto companies who  
2 I think precipitated this entire action, but now are  
3 saying, and I have heard them in many places saying, this  
4 isn't really what they want. They want something else.

5 But they're also not in a position to negotiate  
6 with California, because I think it's -- you know, it's  
7 fairly obvious that politics does play a role in this  
8 situation. It would inevitably, and if the companies were  
9 to present a deal that they and California agreed to to  
10 the federal administration, that would not go well in  
11 terms of getting where we -- where we would like to go.

12 So we're in somewhat an awkward position. But  
13 one thing that has been a problem all along is that we  
14 don't have all the data that the federal government, at  
15 least in theory, is relying on to justify the need for a  
16 rollback here, because we have not received the compliance  
17 plans from the company.

18 So the staff has prepared a letter, which I  
19 believe is about to go out or has already gone out - I'm  
20 not quite sure - to all the manufacturers, to their CEOs  
21 basically asking them to come in and in writing present to  
22 us what their compliance plans actually are, so we're in a  
23 position to see for ourselves if there is a real problem  
24 here, and where the flexibilities could be found, and how  
25 we could move forward in a more -- in a more collaborative

1 manner.

2           But meanwhile, the record closes on this existing  
3 federal proposal October 26th. They granted a three-day  
4 extension in response to many requests for more time. So  
5 the record will close on the 26th. Then it goes into a  
6 period of sort of behind-the-scenes work, you know, by the  
7 federal agencies. And there's the possibility that  
8 California could be involved. Although, again, despite  
9 their stated willingness to work with California, we  
10 remain in this very awkward situation, where at least as  
11 far as the agencies are concerned, we're just a  
12 stakeholder like any other stakeholder. They do not see  
13 us as a partner and a collaborator in this process.

14           But be that as it may, you know, that's what  
15 the -- that's what situation is, and so we're going to do  
16 our best to assemble a sufficient level of knowledge and  
17 detail here, because we work on a technical basis, you  
18 know, to see where there could be some room for  
19 flexibilities and to follow through on the commitment that  
20 we've made all along, that we would prefer this to be a  
21 national program just as everybody else would. And we are  
22 not searching for an opportunity to, you know, test our  
23 strength in the litigation arena.

24           I think anybody who's been watching what was  
25 going on in the Senate yesterday, and I haven't seen

1 anything yet today, but from what I've heard, can  
2 understand why, you know, we just as soon not be caught up  
3 in the drama of the potential Supreme Court litigation at  
4 this point either.

5           So all in all, despite our convictions that we're  
6 right legally, and factually, and morally, we would also  
7 like to, you know, find a way to get this all resolved.  
8 And in the meantime, I know my fellow Board members have  
9 felt all along that there's a lot more that we need to be  
10 doing about reducing vehicle emissions. That, you know,  
11 this is like a small -- it's like a baseline for, you  
12 know, where we need to move to.

13           But anyway, I just thought I should sort of lay  
14 that out in response to the many helpful comments that  
15 we've received and the support to let people know where  
16 things are from my perspective, and then to invite the  
17 Board members to either comment or ask any questions.

18           So I'll throw it open for some discussion.

19           Dr. Sperling.

20           BOARD MEMBER SPERLING: Thank you, Chair Nichols.

21           So I would add to your just list of reasons for  
22 what we're doing as -- and I'd add economically also, and  
23 I'll come back to that in a second. It seems listening to  
24 this that this is really a no-brain -- in terms of the  
25 action before us, it's a no-brainer. We -- you know, we

1 need to act to support our sister states -- 177 states.  
2 And delaying would create a lot of problems there. So,  
3 you know, I just don't see any other option other than  
4 what is proposed by the staff.

5           Number two, I agree that there -- with what some  
6 of the car companies and some others said that it would be  
7 desirable to make some changes in the regulation. And I  
8 think that this Board would probably support many of them.  
9 I certainly do. I mean, there's changes such as how we  
10 treat electric vehicles. And I know the automobile  
11 industry itself agrees with this that, you know, providing  
12 a better treatment of electric vehicles.

13           So there's certainly many things to talk about in  
14 terms of changes later on, whether it through -- whether  
15 it's in the negotiations or in the voluntary program. I  
16 guess that's a little bit of advice on the negotiation,  
17 but --

18           (Laughter.)

19           BOARD MEMBER SPERLING: In a gentle kind of way.

20           (Laughter.)

21           BOARD MEMBER SPERLING: And the third point I  
22 wanted to make is that there's a lot of question about --  
23 the question of these standards by both the Trump  
24 administration and by the car industry originally was  
25 that, you know, fuel prices were not as high as we

1 thought. Although, now they're going back to what we --  
2 what is in the original proposal.

3 But it's really -- there is a fundamental  
4 challenge there, and that we do want people to be buying  
5 these low carbon efficient vehicles. And the challenge is  
6 how to make that happen. And so there is one important  
7 idea, one way to make that happen that should have a lot  
8 of support from consumers, from the industry, from  
9 government, and that is this idea of feebates.

10 And we talk about here what are -- so if we don't  
11 come to a negotiated settlement -- I think it was  
12 Christine Kirby from Massachusetts who I'll call out for  
13 being a great leader and partner for many, many years with  
14 us and in this area, you know, talked about other programs  
15 that would be needed. And Steve Douglas also talked about  
16 strong support -- from the Alliance about strong support  
17 for incentives.

18 Well, that's what we have here. You know, that's  
19 what feebates does. So for those of you not familiar,  
20 that means you haven't been coming to many Board meetings  
21 where I've been talking.

22 (Laughter.)

23 CHAIR NICHOLS: They haven't been listening  
24 carefully enough.

25 BOARD MEMBER SPERLING: Not listening.

1           It's the idea that if you buy a high-carbon  
2 inefficient vehicle, you pay a fee. If you buy an  
3 efficient low-carbon vehicle, you get a rebate. And you  
4 can do it in such a way that there's -- it's revenue  
5 neutral, so there's no cost to consumers, no cost -- or no  
6 net cost, no cost to government. And, in fact, there's a  
7 long -- a lot of benefits to consumers.

8           And so I put that on the table as one of these  
9 other things that actually I think we should be doing,  
10 because it will really help the industry sell these more  
11 efficient vehicles, and it will support people. It's an  
12 equity argument also, because that will mean the smaller  
13 more efficient vehicles will be much cheaper with large  
14 incentives. It provides a permanent incentive program for  
15 our zero-emission vehicles going into the future. It's  
16 all good.

17           And on that point, I just want to elaborate on  
18 what I said about economically, which actually underlines  
19 all of what we're talking about here. And that is that  
20 every economic analysis that's been done -- and even if  
21 you use the numbers from the Trump administration,  
22 consumers come out better with these greenhouse gas  
23 standards going forward, because the amount of money  
24 that's save in fuel is much greater, in fact, several  
25 times greater with most analyses than the extra cost of

1 the vehicle in terms of the efficiency in low-carbon  
2 technology.

3 So even if you don't even take into account  
4 climate or air pollution, or all these other benefits, you  
5 know, it's also a no-brainer from an economic perspective.

6 So vote yes.

7 (Laughter.)

8 CHAIR NICHOLS: Got it.

9 Dr. Balmes, I think that's a motion. All right.  
10 I'll take that as motion.

11 BOARD MEMBER DE LA TORRE: (Nods head.)

12 CHAIR NICHOLS: And a second.

13 You can move forward.

14 BOARD MEMBER BALMES: Well, as a scientist, I try  
15 not to be overtly political, but I actually have to be  
16 today. And I appreciate our state partners on the 177  
17 rule, their strong support for our efforts. And I just --  
18 it absolutely drives me crazy the states' rights issue.  
19 States are allowed to take away voter rights, but the  
20 current Federal administration wants to take away the  
21 rights of multiple states to provide a cleaner  
22 environment. I just don't get that on any level.

23 As a scientist, I'm appalled at the total disdain  
24 for evidence, especially scientific evidence. For  
25 example, climate change won't go away by stripping all

1 mention of the term from EPA websites. Policies to  
2 encourage burning as much oil as possible make absolutely  
3 sense. There's no evidence in support of this policy,  
4 either scientific in terms of what we know about  
5 greenhouse gas emissions, or economic as Professor  
6 Sperling just mentioned.

7           And on a final note, because I'm sure my fellow  
8 Board members have other things to add, they just  
9 announced today that the EPA is going dissolve its Office  
10 of the Science Advisor. Again, science is going to go  
11 away just because they get rid of an office.

12           But I'm really very upset about the fact that you  
13 cannot make policy -- environmental policy with a total  
14 disregard of the facts. You know, alternative facts don't  
15 make it in terms of environmental policy.

16           So I strongly support us going forward with  
17 the -- our current policies.

18           CHAIR NICHOLS: Thank you.

19           Yes. Go down the line here. You first, John.

20           BOARD MEMBER GIOIA: I won't add to the wise  
21 comments of my colleagues. I won't repeat those.

22           But let me just say, and that's why I appreciate  
23 the public health air emissions slide as a local air  
24 district regulator, this will increase emissions in  
25 communities near refineries, and make it harder for

1 communities to meet air district stand -- to meet air  
2 quality standards.

3           So I think we need to understand the local  
4 impacts -- air quality impacts from this approach by the  
5 federal government in addition to all the other issues  
6 that my colleagues have raised.

7           CHAIR NICHOLS: Thank you.

8           Hector.

9           BOARD MEMBER DE LA TORRE: Thank you. First of  
10 all, everything you said.

11           (Laughter.)

12           CHAIR NICHOLS: Thank you.

13           BOARD MEMBER DE LA TORRE: But, you know, I like  
14 to put things in a little more colorful language.

15           (Laughter.)

16           BOARD MEMBER DE LA TORRE: First of all, we have  
17 a national standard. And the OEMs went to Washington and  
18 asked for changes to an administration that they knew,  
19 should have known, was an irrational actor. If they were  
20 paying any attention to that campaign, they should have  
21 understood what they were doing.

22           So when I hear let's wait and see, you didn't  
23 wait and see. You ran to this administration right around  
24 election day. He wasn't even sworn in yet and you were  
25 there. So we are here because of you.

1           A few of you raised my comments from March of  
2 2017 where I talked about a divorce. I appreciate that.  
3 I appreciate that you remembered what I said, and now here  
4 we are. We are in litigation. There's probably going to  
5 be more. But telling us to stand down in the divorce that  
6 we warned you was going to happen, and here we are having  
7 this fight, and you're telling us to stand down, to wait  
8 and see is a ridiculous request. And to continue that  
9 team of the divorce, it's like in the middle of a  
10 contentious divorce, the kids having a temper tantrum and  
11 wanting the parents to pay attention to them, while  
12 they're throwing a temper tantrum over something.

13           It's not about you. It's about this government  
14 of the state of California, and the other states thank you  
15 very much, and the federal government. You triggered it,  
16 and now we have to follow through with it.

17           The issue of voluntarily standards, that just  
18 makes me laugh. California is not Blanche DuBois. We're  
19 not waiting on the kindness of strangers. We have to do  
20 by the people of California what we have to do, which is  
21 to make sure that we are protecting the environment, to  
22 make sure that we're reducing greenhouse gases.

23           And so please trust us, we can do some  
24 voluntarily standards. We'll do above and beyond. No.  
25 We need to know. We are a regulatory body. We don't go

1 around asking people, oh, please can you -- can you do  
2 what we need you to do? No, that's now what our role is.  
3 That's not why we're here.

4 In terms of softening our standards, well, we  
5 kind of already did, back in 2012. If we had done our  
6 own, we would have been tougher than what we did with you  
7 and the federal government. Even though that was a  
8 friendly federal government, that's not as much as we  
9 could have done, if we'd done it on our own. We did it --  
10 we made a concession at that time in the interests of the  
11 national standard.

12 And so to ask us to make further concessions all  
13 these years later because you don't like some of the  
14 pieces of it that you agreed to in 2012, that makes no  
15 sense either. That feels a lot like the Brezhnev  
16 doctrine, what's mine is mine, and what's your, we'll talk  
17 about.

18 (Laughter.)

19 BOARD MEMBER DE LA TORRE: We are not negotiating  
20 against ourselves here. We have one goal, which is we are  
21 going to have no net decrease in GHG emissions over the  
22 course of the remaining time of this contract of this  
23 deal. A deal is still a deal. And regardless of what's  
24 going on back in Washington, regardless of whether they  
25 treat us as stakeholders, we have rights, and we're going

1 to exercise those rights to the hilt.

2 And, you know, if they don't like it, I welcome  
3 them to invoke cloture in the Senate and make changes,  
4 because that's what it's going to take on their side.

5 Thank you.

6 CHAIR NICHOLS: Any further thoughts before we  
7 bring this to a vote?

8 Ms. Mitchell.

9 BOARD MEMBER MITCHELL: Thank you.

10 And I don't know whether anybody could say it  
11 better than Hector has said it. The thing that's really  
12 disturbing here is that this involves not just our GHG  
13 emission reduction program, but tailpipe emissions, the  
14 CAFE standards that we have worked so hard to get here in  
15 California.

16 I like to think that California discovered smog,  
17 and we also discovered the cure for smog. Haagen-Smit  
18 came up with a tailpipe emission combining with sunlight,  
19 and that's how we got ozone.

20 And so we really have a big stake in this to  
21 protect what it is we have so far achieved here in  
22 California. We are so thankful to our Section 177 states,  
23 and those of you out there who have supported us in this  
24 endeavor. We don't want to go backwards. We can't go  
25 backwards. It's a matter of public health, and a matter

1 of global warming and protecting our earth.

2 So I stand firmly with our Chair on this, and our  
3 board that we have to move forward with this and we have  
4 to do it immediately, so that we can help our Section 177  
5 states do what they need to do as well.

6 CHAIR NICHOLS: Thank you.

7 We've been joined today by our Senate appointee  
8 to the Board, Ricardo Lara. So would you like to add  
9 something?

10 SENATOR LARA: Thank you. Thank you.

11 To the states that are here, I want to welcome  
12 you on behalf of the California Legislature. Thank you  
13 for being part of this important discussion with us, and  
14 being part of this important fight for, not only our  
15 states, but the nation.

16 You know, I stand in strong support of the staff  
17 recommendation to protect our vehicle standards, including  
18 the federal crediting system for low GWP systems, as we in  
19 California now move to create an incentive program to  
20 reduce our HFC gases, which is unprecedented as we now  
21 join Japan and Germany on this important effort.

22 And I agree with our Chairwoman as we talk about  
23 the fact that this is the bare minimum of what we can be  
24 doing. And in the legislature, we've answer the heed of  
25 continuing to create policies that further create an

1 opportunity for the expansion of EVs in our communities,  
2 particularly in our working class and low-income  
3 communities, as we now expand the sticker HOV program to  
4 used EVs, so that as these vehicles mature, and are now  
5 resold, that folks who have an opportunity to purchase  
6 these used vehicles actually also take part in our sticker  
7 program, which we know continues to be one of the critical  
8 incentives to purchasing an EV in our state.

9           Likewise, we continue to create mechanisms to  
10 stabilize our energy rates, so that we continue to apply  
11 that to our large EV fleets and freights, as we continue  
12 to figure out methods and strategies to further perpetuate  
13 these technologies and continue to foment them.

14           And we've been very successful. We've been able  
15 to really continue to penetrate the market, and again do  
16 what we can to continue to be a global leader in this  
17 issue.

18           I think, you know, this is an important path  
19 forward. And without these emission reductions we will  
20 continue to have to find reductions elsewhere. And where  
21 do we find these reductions? And I think it's actually  
22 quite disingenuous from the automobile industry to come in  
23 and say let's work collaboratively with the federal  
24 government. Well, we've tried, and we clearly are not  
25 welcomed in Washington D.C. And that's okay. We're used

1 to not being welcomed in a lot of places.

2 (Laughter.)

3 SENATOR LARA: So this is why we lead, and this  
4 is why we take the mantle. We don't wait for federal  
5 government to act. We are California, and now we are  
6 joined with several states that share in our values. And  
7 as the gentleman said from NL -- NLC said that the feds  
8 are looking forward to having this fight. Well, guess  
9 what, we're also looking forward to having this fight,  
10 because the health of Californians, the health of our  
11 state, our nation, and the globe are at stake. And that  
12 is a fight worth having, and we're ready and we'll welcome  
13 it.

14 This is why I think this is a perfect step  
15 forward. I commend the staff for continuing to look on  
16 behalf of the best interests of every single Californian  
17 and ensuring that we are in the best place to continue to  
18 win, and do what we have to do to protect our climate and  
19 our environment.

20 Thank you.

21 CHAIR NICHOLS: Thank you. One more comment  
22 here. Yes.

23 BOARD MEMBER SPERLING: Yeah, I support what  
24 Senator Lara just said, and some others. You know, we've  
25 hears some fiery speeches here. I have to say I'm glad

1 Chair Nichols is the one leading the negotiations, because  
2 I would be a horrible negotiator.

3 (Laughter.)

4 BOARD MEMBER SPERLING: But I do want to make a  
5 comment that, you know, at the end of the day, the auto  
6 industry in particular does have to be a partner, you  
7 know, with us going forward. And, you know, yeah, they  
8 screwed up with, you know, initially in dealing with the  
9 administration. I think they appreciate that as well. I  
10 guess that wasn't a technical term, but --

11 (Laughter.)

12 BOARD MEMBER SPERLING: But, you know, going  
13 forward, you know, we have to -- however it goes forward,  
14 this is -- this entails a lot of stakeholders and a lot of  
15 organizations. So, you know, I don't want to be an  
16 apologist -- I'm not an apologist for the auto industry,  
17 but we do need to look at them as our partners in making  
18 this work successfully going forward.

19 CHAIR NICHOLS: Okay. And now I guess the last  
20 word goes to Dr. Sherriffs.

21 BOARD MEMBER SHERRIFFS: Well, I really didn't  
22 want the last word. But yeah, I'll try and speak as a  
23 scientist and an advocate for health. And it's certainly  
24 very good that I am not doing the negotiating.

25 But those negotiations clearly need to be driven

1 by our goals, and echoing the comments made by my  
2 colleague here, that no net loss. And, in fact, I would,  
3 say, oh, we're renegotiating agreed upon standards. Well,  
4 staff is directed to develop the data, to understand  
5 better what's going on, and has been commented, well, we  
6 step back a little bit. And when I remember discussions  
7 in 2016 and 2017, and how industry was overperforming, and  
8 consumers were benefiting beyond what we had hoped.

9 Well, where should we begin our negotiation from?  
10 We should be considering asking for even more. This is an  
11 opportunity potentially to get more in terms of greenhouse  
12 gas reductions, to get more in terms of criteria  
13 pollutants, to get more in terms of health benefits.

14 So if it's being opened up, I don't think it's  
15 being opened up for us to think, well, how far back are we  
16 going to have to step? It's, well, is this an opportunity  
17 to move forward?

18 And I again --

19 BOARD MEMBER SPERLING: With feebates.

20 BOARD MEMBER SHERRIFFS: With feebates or  
21 whatever, or whatever. There's so many ways to do it.

22 And I just want to add thanks for the state  
23 representatives who have come, because I'm sure the  
24 journey, not just in the miles, and the airlines, and all  
25 of that, I'm sure it's not a political straight road to

1 get here, so thank you for your efforts and support.

2 CHAIR NICHOLS: Okay. I think that does conclude  
3 the comments from the Board members, and I will endeavor  
4 to take them all into consideration. And I know the staff  
5 has heard you as well.

6 Whenever I go to a meeting with our federal  
7 counterparts, I am reminded of a story that my husband,  
8 who was a litigator used to tell about Averell Harriman  
9 when he was negotiating on behalf of the United States  
10 with Churchill and Stalin at the end of the Second World  
11 War, and he, in his memoirs, wrote that his secret to  
12 negotiating with Stalin, who was famously bullying in his  
13 behavior, was that he just turned his hearing aid off.

14 (Laughter.)

15 CHAIR NICHOLS: And having reached an age where  
16 I have actually acquired hearing aids, I've been thinking  
17 about that as a -- as a tactic.

18 (Laughter.)

19 BOARD MEMBER BALMES: Can you turn your Tweet  
20 feeds off, though?

21 (Laughter.)

22 CHAIR NICHOLS: Anyway. With that note, I'm  
23 going to call for the question here on the resolution. We  
24 have a motion and a second on the table, so would all in  
25 favor please say aye?

1 (Unanimous aye vote.)

2 CHAIR NICHOLS: Any opposed?

3 Any abstentions?

4 Okay. I think it's done and message is clear.

5 So thank you, staff, and we'll keep persevering  
6 here. Thank you very much.

7 (Applause.)

8 CHAIR NICHOLS: I see we have a lot of people who  
9 joined us who are here for the transit rule.

10 And so why don't we just take a brief break, like  
11 10 minutes, to reassemble, and then we'll move on to that  
12 item.

13 (Off record: 11:10 a.m.)

14 (Thereupon a recess was taken.)

15 (On record: 11:29 a.m.)

16 CHAIR NICHOLS: Ladies and gentlemen, we're ready  
17 to move on to the Innovative Clean Transit Rule.

18 All right, everybody. Our second and final item  
19 for the Board's consideration today is the proposed  
20 Innovative Clean Transit Regulation. Transit agencies  
21 provide safe, affordable and reliable transportation  
22 service throughout the state and serve a critical need,  
23 especially for transit dependent individuals, including  
24 low-income Californians.

25 They have played and will continue to play

1 important roles in helping California to meet air quality  
2 standards, achieving greenhouse gas emissions reductions,  
3 protecting our communities not only by deploying clean  
4 technologies, but also by providing new and innovative  
5 services to reduce congestion.

6 Transit agencies have also been our partners in  
7 leading the way with heavy-duty vehicle technology  
8 innovation. They were one of the first to control harmful  
9 diesel exhaust by retrofitting existing engines with  
10 particulate filters, and many have embraced other advanced  
11 engine technologies and zero-emission buses.

12 Today, several transit agencies already have  
13 considerable experience with zero-emission buses, and many  
14 more are beginning to incorporate them into their fleets.  
15 Broadly implementing zero-emission technologies is a  
16 necessary component to effectively address multiple and  
17 complex air quality and climate protection issues all at  
18 the same time.

19 In my region of the state, Los Angeles, several  
20 transit agencies have already committed to 100 percent  
21 electrification by 2030, including Foothill Transit, L.A.  
22 DOT and L.A. Metro. The proposed regulation that is  
23 before us aims to achieve a long-term goal of transforming  
24 the public transit sector to zero-emission technology by  
25 2040. How we meet that goal is the key question before

1 us.

2           The goal -- the technology continues to advance,  
3 and more work still needs to be done. By working towards  
4 a common goal, we can assure that we make a successful  
5 transition. I want to particularly thank the agencies for  
6 having worked so hard with us. And although, I know not  
7 all are in full support of the proposal, I do believe that  
8 we've come a long way in at least establishing the  
9 communications that are going to be necessary as we move  
10 forward.

11           So with that, Mr. Corey, would you please  
12 introduce this item?

13           EXECUTIVE OFFICER COREY: Yes. Thanks, Chair.

14           The proposed Innovative Clean Transit Regulation  
15 is identified in the state strategy for the State  
16 implementation Plan, and the 2017 Climate Change Scoping  
17 Plan as a necessary component for California to achieve  
18 established near- and long-term air quality and climate  
19 protection targets.

20           Zero-emission buses provide immediate health  
21 benefits to local communities are more energy efficient  
22 than conventional buses and significantly reduce petroleum  
23 and other fossil fuel use.

24           Accelerating the use of zero-emission buses is a  
25 key step in advancing the use of zero-emission technology

1 and other heavy-duty vehicles. And as you indicated,  
2 transit agencies are taking the lead in introducing  
3 zero-emission technologies in heavy-duty sectors -- or  
4 heavy-duty vehicles. Throughout the development of this  
5 regulation, we met with several of the transit agencies  
6 and appreciate their partnership, and strongly believe  
7 this proposal reflects our conversations. And as you  
8 know, it is much better than the early process.

9           And also as you noted, transit agencies provide a  
10 critical service to Californians and lead in technology  
11 innovation that improves mobility and air quality. Having  
12 a strong partnership with transit agencies will continue  
13 to be our top priority to ensure a successful deployment  
14 of zero-emission buses while continuing to improve transit  
15 services.

16           Part of making a successful transition includes  
17 structuring the proposed regulation to preserve access to  
18 existing funding to assist transit agencies in deploying  
19 buses and infrastructure. The combination of incentives  
20 and regulatory measures provide a strong market signal for  
21 zero-emission technology deployment, and in creating new  
22 jobs and investment in California.

23           With that, I'll asking Shirin Barfjani of the  
24 Mobile Source Control Division to begin the staff  
25 presentation.

1 Shirin.

2 (Thereupon an overhead presentation was  
3 presented as follows.)

4 AIR POLLUTION SPECIALIST BARFJANI: Thank you,  
5 Mr. Corey. Good morning Chair Nichols and Board members.

6 Staff has worked closely with transit agencies,  
7 environmental groups, and other stakeholders in the past  
8 three and a half years. We have developed a transit  
9 proposal that achieves maximum emission reduction,  
10 advances zero-emission technology, yet the proposal is  
11 mindful of how transit agencies plan, operate and maintain  
12 transit buses.

13 I will describe how transit agencies have been  
14 taking a lead role in furthering California's air quality  
15 and climate protection goals, what the staff proposal is,  
16 what funding is available for transit bus electrification,  
17 and what the next steps are.

18 --o0o--

19 AIR POLLUTION SPECIALIST BARFJANI: Transit  
20 agencies provide safe, reliable and affordable mobility  
21 options to tens of millions Californians, especially for  
22 transit-dependent and low-income riders. Transit agencies  
23 are not only mobilizing people, but also moving our  
24 communities toward a more sustainable future. Sorry.

25 They shape a transportation landscape through

1 enhanced connectivity and improved mobility. Successful  
2 operation of public transit supports the ability of local  
3 agencies to meet their greenhouse gas emission reduction  
4 targets required by Senate Bill 375 the Sustainable  
5 Communities and Climate Protection Act, and achieve carbon  
6 neutrality by 2045.

7           There are more than 200 public transit agencies  
8 in California operating nearly 13,000 transit buses. They  
9 are diverse and differ in modes the operate, bus fleet  
10 size, and terrain.

11                           --o0o--

12           AIR POLLUTION SPECIALIST BARFJANI: Transit  
13 agencies are the state's long-term partners in leading  
14 heavy-duty vehicle technology innovations. They have  
15 played and will continue to play important roles in  
16 helping California meeting air quality standards and  
17 climate protection goals by deploying the cleanest  
18 technologies and adopting new innovative ways to increase  
19 ridership -- ridership.

20           Their leadership continues today with multiple  
21 transit agencies operating zero-emission buses in their  
22 regular revenue service and use low NOx engines. It is  
23 important since zero-emission technologies and experience  
24 developed for transit -- sorry, this is important since  
25 zero-emission technologies and experience developed for

1 transit buses can be directly transferred to other  
2 heavy-duty applications.

3 A robust and sustainable public transit system,  
4 along with affordable transit-oriented housing is a key to  
5 accomplishing California's transportation and air quality  
6 goals.

7 --o0o--

8 AIR POLLUTION SPECIALIST BARFJANI: The current  
9 transit fleet rule was originally adopted about 20 years  
10 ago and included a zero-emission bus demonstration  
11 followed by a purchase requirement. In 2009, the Board  
12 adopted -- the Board determined technology was not yet  
13 ready and directed the staff to prepare amendments to the  
14 regulation to delay the zero-emission bus purchase  
15 requirements and to conduct further research on commercial  
16 readiness.

17 CARB staff conducted a comprehensive technology  
18 evaluation in 2015, and concluded the zero-emission bus  
19 technologies were in -- were in their early  
20 commercialization stage. Since then, we have continued to  
21 see significant progress in the technology. And staff  
22 began working with transit agencies and other states --  
23 state holders on developing a path forward.

24 --o0o--

25 AIR POLLUTION SPECIALIST BARFJANI: This map

1 shows more than 50 California transit agencies are either  
2 operating zero-emission buses in their daily operation or  
3 are planning to deploy them in the near future, more than  
4 any other state.

5 As of August 2018, there are more than 500  
6 zero-emission buses in operation or on order, and another  
7 729 have been awarded funding or are planned to be  
8 purchased in the next few years.

9 --o0o--

10 AIR POLLUTION SPECIALIST BARFJANI: Currently, at  
11 least 16 California transit agencies are committed to  
12 making a full transition to zero-emission technologies  
13 with the Board adoption policy, with the Board adopted  
14 policy. Many of them set a goal of full transition before  
15 2040. These transit agencies together represent close to  
16 50 percent of all buses in the State of California.

17 --o0o--

18 AIR POLLUTION SPECIALIST BARFJANI: The key  
19 pieces supporting a transition to zero-emission buses are  
20 coming into place. Government agencies, industry, and of  
21 course transit agency are work -- are working hand-in-hand  
22 to deploy the technologies and address barriers.

23 California is now -- California is now home to  
24 zero-emission bus manufacturing, which create high-quality  
25 employment opportunities. Five manufacturers have

1 California-based plans, making either battery electric, or  
2 fuel electric buses, or both. These manufactures are  
3 leading the transition to green jobs in California.

4 Other key pieces of transition include: Major  
5 investment by California utilities to pay for charging  
6 infrastructure, and to establish new rates; actions to  
7 streamline zero-emission bus purchases and standardized  
8 charging; and, of course, investment of significant  
9 funding to overcome early high costs.

10 Despite the discrete -- sorry, despite the  
11 increase momentum in advancement and deployment of  
12 zero-emission bus technologies, additional technology  
13 improvements and cost reduction are still needed to meet  
14 our long-term goals.

15 --o0o--

16 AIR POLLUTION SPECIALIST BARFJANI: This slide  
17 shows some of the overarching principles that we embraced  
18 in the -- in this process, and are reflected in the staff  
19 proposal.

20 Most importantly, we have a shared goal with  
21 California Transit Association and environmental groups,  
22 on overarching a zero-emission system in California by  
23 2040. We believe the proposal provides flexibility and  
24 sufficient time for transit agencies to address potential  
25 challenges, and take advantage of available funds.

1           The proposal also strive to not just maintain,  
2 but enhance service through increased mobility options.  
3 Let me highlight the last point on this slide. Staff is  
4 committed -- staff is committed to successful  
5 implementation of this regulation and technology long  
6 term. As such, we continue to not only monitor the  
7 progress, but be actively involved in overcoming issues.

8           We will report back to the Board periodically as  
9 well as commit to a comprehensive review, which I will  
10 discuss later.

11                           --o0o--

12           AIR POLLUTION SPECIALIST BARFJANI: We now move  
13 to a description of the proposal.

14           Briefly, the major elements of the proposal  
15 include a zero-emission bus rollout plan, early action  
16 credits, zero-emission bus purchase requirements, and the  
17 use of low NOx engines in renewable fuels. Each of these  
18 will be described in more detail on the following slides.

19                           --o0o--

20           AIR POLLUTION SPECIALIST BARFJANI: The proposed  
21 ICT regulation applies to all transit agencies in  
22 California, but has delayed requirement for smaller  
23 transit agencies.

24           The current staff proposal uses a threshold of  
25 100 transit buses to differentiate the large transit

1 agencies from the small ones. Staff is preparing proposed  
2 changes to the definition as highlighted in the orange  
3 box, to be more -- to be more consistent with one that is  
4 it commonly used by transit agencies, as proposed by the  
5 California Transit Association.

6 --o0o--

7 AIR POLLUTION SPECIALIST BARFJANI: For  
8 successful zero-emission bus deployment, it is essential  
9 for transit agencies to engage local communities and have  
10 an individualized rollout plan on how they would deploy a  
11 zero-emission bus fleet that would meet the 2040 goal.

12 Information from these plans will help in shaping  
13 future funding decisions and utility planning that will  
14 help support market expansions.

15 Staff is proposing additional time for small  
16 transit agencies to ensure they have an opportunity to  
17 learn and benefit from larger fleet experiences.

18 --o0o--

19 AIR POLLUTION SPECIALIST BARFJANI: The  
20 zero-emission bus purchase requirements are based on an  
21 annual purchase percentage according to transit agencies'  
22 regular purchase cycle. Buses may be used for their full  
23 useful lives, and no buses would need -- would need to be  
24 replaced early.

25 The zero-emission bus purchase requirement would



1 to a future -- will count toward future compliance  
2 obligations -- obligations. There are additional  
3 compliance options to provide flexibility that I will  
4 describe in the next few slides.

5 --o0o--

6 AIR POLLUTION SPECIALIST BARFJANI: The joint  
7 compliance option allows transit agencies to work together  
8 to pool resources to more effectively deploy zero-emission  
9 buses and the related infrastructure. This option allows  
10 for better coordination with the -- within a region, a  
11 metropolitan planning organization, and an air district,  
12 and complements similar coordination that occurs in  
13 meeting SB 375 goals.

14 --o0o--

15 AIR POLLUTION SPECIALIST BARFJANI: Early action  
16 bonus credits are proposed for transit agencies that  
17 deployed zero-emission buses early. These pioneers  
18 accepted higher risks and costs at early stages of  
19 technology development, and helped the state,  
20 manufacturers, technology providers, and utilities to  
21 address and overcome early barriers. Their experience is  
22 invaluable to the entire California's medium- and  
23 heavy-duty -- medium- and heavy-duty vehicle sector.

24 These bonus credits can be used towards meeting  
25 purchase requirements until 2029 when 100 percent purchase

1 requirements kick in. However, bonus credit cannot be  
2 used towards meeting the threshold for early ZEB,  
3 zero-emission bus compliance.

4 --o0o--

5 AIR POLLUTION SPECIALIST BARFJANI: The  
6 zero-emission mobility option encourages innovation in  
7 providing first and last mile connectivity and improved  
8 mobility for transit riders. It can be used in lieu of  
9 purchasing zero-emission buses, if the services are  
10 provided with zero-emission vehicles, such as vanpools,  
11 microtransit, and bicycles. Within this option, staff is  
12 also proposing a multiplier of three for bicycle mileage.

13 This option would enhance service by being  
14 responsive to diverse and changing mobility concepts. It  
15 would also complement regional plans for developing  
16 sustainable communities and support the long-term goal of  
17 achieving a zero-emission transit system.

18 --o0o--

19 AIR POLLUTION SPECIALIST BARFJANI: There are  
20 multiple bus types used by transit agencies for various  
21 purposes. These bus types include smaller cutaways, motor  
22 coaches, double deckers, and articulated buses.

23 Zero-emission technology in these categories is  
24 not as advanced as the common 40-foot bus. Therefore,  
25 staff is proposing to exclude them from the zero-emission

1 bus purchase requirements until 2026. They would only be  
2 required at that time after the applicable bus type has  
3 passed the Altoona testing requirements.

4 --o0o--

5 AIR POLLUTION SPECIALIST BARFJANI: In close  
6 coordination with transit agencies, we included safeguards  
7 to ensure transit service is not compromised in any way.  
8 Concerns related to a delay in bus delivery,  
9 infrastructure issues, or the ability -- or the ability  
10 of an available bus to meet district's needs can be  
11 addressed. These safeguards allow for consideration of  
12 individual transit agencies' circumstances and ensures  
13 that transit agencies are not required to buy  
14 zero-emission buses that would not meet their needs.

15 --o0o--

16 AIR POLLUTION SPECIALIST BARFJANI: Even though  
17 zero-emission bus technologies have advanced rapidly in  
18 recent years, continued improvements in technology are  
19 needed for a complete transition.

20 As mentioned previously, staff has committed to  
21 report back to the Board periodically with updates. We  
22 have also committed to conduct a comprehensive evaluation  
23 of zero-emission bus technology and infrastructure with  
24 real-world data. The review will include an analysis of  
25 costs, range, battery performance, and reliability before

1 any zero-emission bus purchase requirement is implemented.

2 --o0o--

3 AIR POLLUTION SPECIALIST BARFJANI: When  
4 conventionally fueled buses are purchased, the proposal  
5 would require low NOx engines, if available. Fuel  
6 switching would not be required.

7 This requirement would apply to all transit  
8 agencies, except for buses dispatch -- dispatched  
9 primarily in rural areas with cleaner air.

10 In addition, staff also proposes to require large  
11 transit agencies to use renewable diesel or renewable  
12 natural gas when renewing fuel contracts -- contracts  
13 starting in 2020. This will further support the LCFS  
14 market.

15 --o0o--

16 AIR POLLUTION SPECIALIST BARFJANI: Along with  
17 development of the regulatory proposal, staff also  
18 prepared a thorough economic analysis detailing the  
19 potential economic impacts. The staff analysis -- the  
20 staff analyzed at least eight alternatives, including some  
21 that were more and less stringent, some that were  
22 voluntarily measures, and some that relate the low-NOx  
23 engines and alternative fuels.

24 Sorry. I repeat it one more time.

25 Staff analyzed at least eight alternatives,

1 including some that were more and less stringent, some  
2 that were voluntary measures, and some that related to  
3 low-NOx engines and alternative fuels.

4           The analysis shows, there is an overall cost  
5 saving of the regulation due to the operational and  
6 maintenance savings of the electric buses. Battery  
7 electric buses have a higher upfront cost, but lower  
8 operating cost. Savings come from reduced fuel cost,  
9 including LCFS credit for electricity and lower  
10 maintenance costs.

11           Although each fleet is different, we have found  
12 that transit buses have a positive payback over their  
13 life, even without other incentives. However, funding is  
14 still important, especially in early years to help reduce  
15 or eliminate the higher upfront costs. When funding  
16 opportunities are considered, these upfront costs can be  
17 reduced or eliminated, and total savings for transit  
18 agencies would be substantial.

19                           --o0o--

20           AIR POLLUTION SPECIALIST BARFJANI: Multiple  
21 state programs provide access to funding for zero-emission  
22 buses. Although, I want to be clear, that most of these  
23 programs are not dedicated to transit agencies. Local and  
24 federal funds are not included in -- are not included in  
25 this slide and add to the opportunities.



1 quality standards, reducing local health risks to  
2 individuals, and meeting climate change goals. The  
3 majority of these benefits will be in the state's most  
4 populated and impacted areas.

5 --o0o--

6 AIR POLLUTION SPECIALIST BARFJANI: Zero-emission  
7 bus experience is helping advance technology deployment in  
8 other heavy-duty on-road sectors to further the emission  
9 reduction goals identified in the State SIP Strategy and  
10 achieving carbon neutrality.

11 The regulation is expected -- expected to  
12 cumulatively reduce GHG emissions relative to current  
13 conditions by 19 million metric tons of CO2 equivalent,  
14 from '20 to 2050.

15 --o0o--

16 AIR POLLUTION SPECIALIST BARFJANI: Staff  
17 prepared a draft environmental analysis for the proposed  
18 Innovative Clean Transit Regulation. The EA also  
19 considered two alternatives, one more and one less  
20 stringent than the staff proposal.

21 The draft EA concluded that implementation of the  
22 proposed regulation could result in beneficial impacts to  
23 energy demand and GHG and greenhouse gases. It also  
24 concluded potentially significant adverse impacts  
25 primarily related to the short-term construction

1 activities.

2 Staff will present the final EA and written  
3 response to comments on the draft EA to the Board at the  
4 next hearing anticipated in January 2019 to finalize the  
5 environmental analysis.

6 --o0o--

7 AIR POLLUTION SPECIALIST BARFJANI: In summary, a  
8 viable zero-emission bus market has now developed with  
9 number of zero-emission bus -- zero-emission transit --  
10 with number of transit agencies committing to fully  
11 electrify their fleets.

12 The proposed ICT regulation is driving  
13 innovation, yet with appropriate safeguards. It provides  
14 a significant number of important benefits as listed in  
15 here.

16 I conclude this presentation with highlighting  
17 findings made after thorough analysis of cost and benefits  
18 of the proposed regulation.

19 The regulation is a necessary program for meeting  
20 the state's goals and requirements to reduce emissions; no  
21 alternative would be more effective and less burdensome in  
22 carrying out the purpose for which the regulation is  
23 proposed, and the proposed amendments are consistent with  
24 the Board's environmental justice policies and do not  
25 disproportionately impact people of any race, culture or

1 income.

2 --o0o--

3 AIR POLLUTION SPECIALIST BARFJANI: This last  
4 slide summarizes the proposed changes that staff is  
5 recommending to be made available for public comments for  
6 an additional 15 days comment period, and presented to the  
7 Board at the future hearing.

8 Staff would consider suggestions in the public  
9 comments and for additional improvements, and expect to  
10 make changes available for public comments in  
11 October/November time frame.

12 The second hearing is anticipated in January of  
13 next year to finalize the environmental analysis, and for  
14 the Board to vote on the updated proposal.

15 This concludes my presentation. Thank you for  
16 your attention.

17 CHAIR NICHOLS: Okay. Thank you. We have a very  
18 long list of witnesses, and I want to encourage those who  
19 are here in support to come up and say their support, but  
20 if at all possible not to take your full three minutes,  
21 because otherwise we're going to be here for a very long  
22 time.

23 So with that admonition, we won't try to cut  
24 short the people who are in opposition, because that -- we  
25 need to hear from you, but we -- but our -- our many, many

1 supporters of this rule probably don't need to detail it  
2 at great length, but we'll listen to everybody.

3           So let's start with Kent Leacock from Proterra.  
4           Good morning.

5           MR. LEACOCK: Good morning.

6           CHAIR NICHOLS: Or almost afternoon. We're right  
7 on the cusp here.

8           MR. LEACOCK: Good morning, Chair Nichols,  
9 members of the Board and staff. Thank you for the  
10 opportunity to provide support. Kent Leacock from  
11 Proterra. And I'll cut right to the chase.

12           My main message is to convey how ready and ripe  
13 the battery technology is to serve transit rides  
14 throughout America. I was here three years ago, and the  
15 zero-emission bus world is completely different than it  
16 is -- than it was then. Proterra alone has now over six  
17 million miles of revenue service and nearly 100 customers  
18 in 39 states and two Canadian provinces.

19           There are now multiple manufacturers of  
20 zero-emission buses in California. And the ZEB industry  
21 will continue to innovate and reduce upfront and  
22 operational costs. We strongly support continued funding  
23 in incentive programs such as HVIP and VW, as well as the  
24 SB 350 transportation electrification for infrastructure  
25 funding.

1           Finally, the last thing I'll close with is that  
2 I'm proud to say that technology transfer is real. I also  
3 talked about that when I was here three years ago. And I  
4 think at the time, I was also the last person on the  
5 agenda.

6           CHAIR NICHOLS: That's right.

7           MR. LEACOCK: So this pretty funny that I'm first  
8 now.

9           CHAIR NICHOLS: The last shall be first.

10          MR. LEACOCK: You may have recently heard that  
11 Daimler Trucks made a strategic investment to partner with  
12 Proterra to utilize the electric drivetrain and energy  
13 storage technology that we developed for transit and apply  
14 it to trucks and electric school buses.

15          This is a clear success of our -- of ARB's  
16 investment in zero-emission transit applying to additional  
17 zero-emission applications. So I thank you for the  
18 opportunity to provide support, and I give you back a  
19 minute and a half. Thank you.

20          (Laughter.)

21          CHAIR NICHOLS: Thank you so much.

22          We brag about Proterra all the time. So  
23 congratulations.

24          MS. NAGRANI: Hello. Urvi Nagrani on behalf of  
25 Motiv Power Systems.

1           For starters, I want to thank you all for being  
2 here today. It's been a very busy two weeks and I saw a  
3 lot of you at GCAS making sure that we're setting global  
4 leadership by our own example, which was entirely in  
5 opposition to the day I had two days ago testifying in  
6 front of the EPA in Dearborn, where we are seeing the  
7 rapid rollback of a lot of wonderful work.

8           And so to come into this room and to see staff  
9 thinking about data, health, and quality of California  
10 lives is very refreshing. So for starters, thank you.

11           Leading to this rule, the idea of a plan that  
12 fits within the scoping plan and beachhead technology  
13 approach that will lead to further applications is real.

14           Motiv Power Systems started by building one  
15 electric school bus. And that technology has already  
16 transferred into delivery applications, work trucks,  
17 electric mobile lung clinics, blood mobiles, book mobiles,  
18 and we're just getting started. This rule and your  
19 foundation for a 100 percent zero emission future for  
20 transit buses is the foundation for that for the State of  
21 California.

22           I am strongly in support. And if there are to be  
23 any modifications, I would only urge that you accelerate  
24 timelines because this is exactly what we need exactly  
25 when we need it.

1 Thank you so much for your time and work.

2 CHAIR NICHOLS: Thank you.

3 CAPCOA EXECUTIVE DIRECTOR ABBS: Good morning,  
4 Chair Nichols and members of the Board. My name is Alan  
5 Abbs. I'm the Executive Director for California Air  
6 Pollution Control Officers Association.

7 In addition, I'm here on of behalf of Wayne  
8 Nastri of the South Coast AQMD and also Jack Broadbent of  
9 Bay Area AQMD. So this is a three-for-one testimony.

10 (Laughter.)

11 CAPCOA EXECUTIVE DIRECTOR ABBS: As -- to start  
12 off, we're in full support of staff's proposal, and we  
13 also appreciate the extensive workshop schedule that led  
14 to this proposal today.

15 As you're aware, in South Coast, medium-duty and  
16 heavy-duty vehicles account for over 25 percent of the NOx  
17 emissions in the district. And their AQMP requires a 50  
18 percent total decrease in NOx to meet their 2031  
19 standards. In the Bay Area, they've established Diesel  
20 Free by '33 initiative to get all diesel emissions out of  
21 the Bay Area. And transit buses are going to be a prime  
22 way of making early action to get that done.

23 And so in addition, we also support the provision  
24 that provides for low-NOx purchase requirements beginning  
25 in 2020, because we have some -- some short-range goals in

1 addition to long-range goals. And so requiring low NOx  
2 early on is a good way to split the middle on this.

3 And as -- and I don't need to talk anything about  
4 AB 617, but the transit buses are going to be a great way  
5 to lower diesel emissions in affected communities.

6 The only thing I would suggest, and I know that  
7 staff is already considering this, has to do with the  
8 incentive programs. And as the presentation showed,  
9 incentives are -- there's a lot of incentives out there,  
10 and incentives are going to be a prime way to -- to get a  
11 lot of these buses out there and in use.

12 And so to the extent possible, we'd like to see  
13 some harmonization of the requirements, as they apply to  
14 transit buses. And then also to consider including  
15 maintenance, training, and some infrastructure as  
16 available funding within those incentive programs just to  
17 make sure that purchase of these buses are still going to  
18 be attractive to transit agencies and the costs don't  
19 outweigh their short-term benefits.

20 And then lastly, I'd just like to remind the  
21 Board that as -- to think about the surplus emission  
22 reduction provisions. This was an issue we had with Carl  
23 Moyer several years ago, where, as you get to lower  
24 emission requirements, the cost effectiveness gets harder  
25 to justify. And so we just need to keep that in mind

1 going forward, that there is a cost effectiveness issue,  
2 and then make sure the incentive programs account for that  
3 and still allow these buses to be funded to the maximum  
4 extent possible.

5 Thank you.

6 CHAIR NICHOLS: Thank you.

7 MR. WARREN: Good afternoon, Chair Nichols and  
8 distinguished Board members. My name is David Warren.  
9 I'm the Director of Sustainable Transportation for New  
10 Flyer of America. We produced -- we are the largest  
11 manufacturer of transit buses in North America. We  
12 produced over 7,300 buses driven by electric motors and  
13 batteries, and 1,700 of these have been zero emission,  
14 either battery electric, fuel cell electric, or trolley  
15 electric.

16 So I'm here to make some comments today regarding  
17 the current state of battery electric bus and fuel cell  
18 electric bus technology and infrastructure. I have six  
19 points to make. I've submitted written comments to you as  
20 well.

21 Point number one, the range of battery electric  
22 bus. Great improvements have been made, but the current  
23 state of the art under severe conditions, 115 degrees,  
24 aged batteries, severe terrain, you're looking at 175 to  
25 225 miles. That compares to a diesel or a CNG bus of 350

1 miles. So when fleets try to the implement the  
2 zero-emission bus, range is going to be a consideration in  
3 their one-for-one bus replacement.

4 Second point, the cost of battery electric buses.  
5 Batteries comprise 35 percent of the cost of a battery  
6 electric bus. So batteries are continuing to decline in  
7 cost. But the challenge will be for transit is that  
8 instead of taking that cost reduction, we're going to  
9 stuff more batteries on the bus to close that range gap.  
10 So in the foreseeable future, don't expect the cost of  
11 these battery electric buses to come down.

12 The other factors are that many of the battery  
13 cells come from Asia. We've got trade policy issues as  
14 well. And then the elements that make up the batteries.

15 The next point is weight. The weight of  
16 batteries on a transit bus is huge, 7,500 pounds. That's  
17 the equivalent of not one, not two, but three Honda Fit  
18 automobiles. So the challenge with battery electric  
19 buses, is that you can carry batteries or passengers.

20 Many of the buses that have been through the  
21 Altoona test cycle, zero emission certain buses have been  
22 overloaded, front axle and gross vehicle weight. It's a  
23 challenge for the industry.

24 Next point I want to make is related to fuel cell  
25 electric buses. For 2018-19, we're going to deliver 27

1 buses to the State of California. The fuel cell  
2 technology is great. It will close the gap on the range  
3 within a CNG or diesel bus. The challenge is going to be  
4 is the infrastructure. We need hydrogen. We need private  
5 and public investment in that. If we can get the  
6 hydrogen, we're going to increase volume. We'll be able  
7 to reduce the cost of those buses.

8           The next point is charging standards. There  
9 is -- there are four charging standards in the industry,  
10 two of these are released and they're published, and two  
11 of them are still in development. By the end of 2019,  
12 those standards will be in place. It should be a  
13 requirement of -- it should be a requirement of the  
14 purchase of the zero-emission buses that the charging  
15 equipment is interoperable and available from multiple  
16 suppliers.

17           And my last point is infrastructure.  
18 Implementing battery electric buses, the technology of the  
19 bus is the easy part. It's the infrastructure, trying to  
20 get to a facility that's going to require 13 to 20  
21 megawatts at a large facility. It's not just the charging  
22 equipment. It's the transformers. It's the switch gears.  
23 It's the metering. It's the big electric -- or pardon me,  
24 copper wire that goes to that facility. It should not be  
25 overlooked in the implementation.

1 Thank you very much.

2 CHAIR NICHOLS: Thank you. Thank you.

3 MR. WAGNER: All right. Hey. Emanuel Wagner  
4 with the California Hydrogen Business Council. I am going  
5 to keep my comments a little shorter here.

6 We are in support of the ICT. We want to make  
7 three recommendations to be looked at, while moving  
8 forward. The first is to require an analysis and the  
9 assessment of both fuel cell electric because and battery  
10 electric bus alternatives, and the justification for the  
11 proportions of each of those in the rollout plans by the  
12 transit agencies.

13 The second one, infrastructure plans and the  
14 rollout plan must be -- must include estimates of time and  
15 cost that will be incurred by the transit -- by the  
16 transit agency for all charging and/or fueling  
17 infrastructure required to ensure these factors have been  
18 taken into account.

19 And thirdly, we recommend a change to require  
20 large transit agencies to submit its board-approved  
21 rollout plan along with its approval to the Executive  
22 Officer by July 1st, 2021, so one year later.

23 The reason for that is that this will allow  
24 important deployments of battery electric buses and fuel  
25 cell electric buses to generate data, which will be

1 invaluable to transit agency assessments.

2 Both AC Transit and Orange County Transit  
3 agencies are taking delivery of multiple BEB and FCEB  
4 deliveries for a single manufacturer this year and the  
5 coming year.

6 The operational service of these buses will be  
7 begin in earnest in the beginning of 2019, meaning that  
8 performance data and reporting will not be available until  
9 well into 2020. So moving the rollout plan deadline to  
10 2021 will allow data to be collected across a full year of  
11 operation for consideration by all California transit  
12 agencies in their rollout plan.

13 So I'm going to cut short here. Appreciate your  
14 time, and we are happy to work with you on some of those  
15 recommendations.

16 CHAIR NICHOLS: Thank you.

17 MR. TEPKE: Good afternoon. I'm Glen Tepke with  
18 the Metropolitan Transportation Commission. That's the  
19 transportation planning and funding agency for the Bay  
20 Area. MTC does not operate transit buses, but we help pay  
21 for most of the buses that are operated in the Bay Area,  
22 so we're very interested in the ICT regulation.

23 MTC shares the goals of the regulation to reduce  
24 greenhouse gas emissions and to achieve a zero-emission  
25 transit fleet by 2040, but we do have some specific

1 concerns about the costs, and especially the funding for  
2 compliance with the regulation. I've submitted a comment  
3 letter that lays those concerns out.

4           Just in the interests of time, I just want to  
5 highlight a couple of them. One is the incentive funding  
6 that the Air Resources Board manages, the HVIP, Hybrid  
7 Voucher Incentive Program, and the Volkswagen  
8 Environmental Mitigation Trust Funds. We think those are  
9 kind of the ideal funding sources for helping the transit  
10 operators cover the incremental capital costs of complying  
11 with the regulation.

12           However, under the proposal, those funds could  
13 not be used for zero-emission buses that are purchased in  
14 compliance with the schedule for the purchase requirement.  
15 They only could be used if the operators are buying buses  
16 sooner or in larger quantities than are required.

17           And the problem with an incentive approach like  
18 that, is that incentives only work if the operators have  
19 the ability to time the purchase of their buses to take  
20 advantage of those incentives.

21           Operators do not have a lot of discretion over  
22 when they buy their buses. Their buses are typically  
23 replaced about every 14 years. They cannot be replaced  
24 early due to federal funding requirements. So whether an  
25 operator is able to take advantage of that incentive

1 funding depends more on kind of the luck of the draw of  
2 when their buses are next due for replacement than it does  
3 with their, you know, willingness to buy zero-emission  
4 buses. So we think that all ZEBs that are purchased in  
5 the state should be eligible for the vouchers from one of  
6 those programs.

7           The second issue is San Francisco Municipal  
8 Transit Agency operates a fleet of electric trolley buses.  
9 They're powered by overhead wires. These are zero  
10 emission buses. They're actually greener than any other  
11 ZEB technology at this point, because they operate on  
12 hydroelectric power.

13           The current transit fleet rule treats those as  
14 zero emission buses, but the ICT proposal does not. Those  
15 buses are very expensive to purchase. So we're painfully  
16 aware of that, since we help pay for them. They're -- the  
17 overhead wire is expense to maintain, so we think that  
18 Muni should get some credit for operating those buses,  
19 which are an important contribution to the zero-emission  
20 transition.

21           Thank you.

22           CHAIR NICHOLS: Thank you.

23           MS. RENGER: Hi. Good afternoon, Chair Nichols,  
24 member of the Board. Laura Renger for Southern California  
25 Edison.

1           First, I'd just like to quickly thank Tony,  
2 Yachun, and Shirin for all of their work on this. Staff  
3 has been amazing to work with, and we really appreciate  
4 this efforts here.

5           Southern California Edison strongly supports the  
6 proposal to transition to zero emission by 2040 for our  
7 transits. I'm going to talk to you today about two  
8 programs that have already been approved by our Public  
9 Utilities Commission that we are offering to support in  
10 this transition.

11           One is a infrastructure investment program where  
12 we will provide \$365 million worth of investment into the  
13 electrical infrastructure to support medium- and  
14 heavy-duty electric vehicles. Under that program, 15  
15 percent -- a minimum of 15 percent of the installations  
16 will be for transits. And this will support a minimum of  
17 870 installations to support 8,490 vehicles.

18           We also have -- I'm sorry. And on that program,  
19 we will also provide 50 percent rebate for the cost of the  
20 electric vehicle charger to support those buses.

21           Early next year, we will also be offering a rate  
22 that was specifically designed to assist with medium- and  
23 heavy-duty infrastructure charging. Under this rate,  
24 demand charges will be waived for the first five years of  
25 the program. In years six through 10, the demand charges

1 will slowly be fanned in. It's a 10-year rate design and  
2 we will be rolling that out early next year.

3           The time is now to act on this rule. And we look  
4 forward to working with CARB and our local communities and  
5 the transits to ensure a smooth transition to the  
6 zero-emission bus future.

7           Thank you.

8           MR. SCHUCHARD: Hello again, Chair Nichols, Board  
9 members. Ryan Schuchard with CALSTART. We're bringing  
10 together two really important parties for a wedding, maybe  
11 to build on a theme from early today. Although a happier  
12 theme. Transit agencies are so important to California,  
13 period, for greenhouse gas reductions. And zero-emission  
14 drivetrains is one of the many things we need to ask them  
15 to do. So we're just -- we value the transit agencies so  
16 much.

17           The other party is zero-emission buses. And  
18 continuing to support the commercialization of this  
19 technology is essential for GHG reductions in transit, but  
20 also building the beachhead markets beyond to trucks. And  
21 we have followed this rulemaking with that in mind very  
22 closely and with great interest. We're committed to  
23 transformational changes, and making rules that work both  
24 for fleets and that accelerate technology.

25           And if I could, I'd just like to acknowledge

1 Senator Lara, he's been really the biggest champion in the  
2 legislature bringing the incentive funding needed in this  
3 industry to have us -- allow us to even have this  
4 conversation. And also, Tony's team and Emily and staff  
5 for really developing the foundations for this.

6 So we -- I'll surely cut to the chase. We have  
7 members and friends on different sides of this.

8 Zero-emission bus manufacturers have -- are showing that  
9 they have technology that does work bus by bus, when you  
10 look at vehicles that have graduated into the early  
11 commercial phase like those you get from HVIP incentives.

12 At the same time with the proposed rule, transit  
13 fleets are being asked to do something that is completely  
14 new, and they face uncertainties when you take into  
15 account the whole operations of a lot of buses together,  
16 on a -- particularly around the whole charging  
17 infrastructure and cost from their perspective

18 So just -- just two thoughts for recommendations.  
19 One, please let's continue to ensure that there is  
20 sufficient incentive funding available for these vehicles,  
21 and off-ramps and flexibility in the cases that transit  
22 agencies truly cannot meet the requirements.

23 And second, to double-down on working closely  
24 with the CPUC and the Energy Commission to ensure that  
25 there are sufficient incentives in the infrastructure for

1 the electrification, both getting the service to the site,  
2 and the chargers done, and the rates that work from the  
3 perspective of the fleet operators.

4           These challenges are sur -- absolutely  
5 surmountable, but they will require some enhanced  
6 coordination and investment

7           Thank you very much for your leadership.

8           MR. McENTAGART: Hello. How are you?

9           Chair Nichols, Vice Chair Berg, Board, staff,  
10 thank you for your work. My name is John McEntagart, and  
11 I am an IBEW official here from Local 551. We represent  
12 all members from the Golden Gate Bridge to the Oregon  
13 state border. And I'm here to speak in strong support for  
14 the advanced Clean Transit Rule. We are asking CARB to  
15 create a regulatory standard that will not only create  
16 better air quality, but also provide good clean green  
17 career pathways. Our members coming out of our  
18 apprenticeships are looking for clean energy career  
19 opportunities. And this is not only an investment in the  
20 air quality, it is an investment in clean energy workforce  
21 for us working Californians.

22           So we ask of you give us clean air, we ask of you  
23 to give us the green jobs, and finally implore you, please  
24 let's be bold. Our health and livelihoods as working  
25 Californians require it. And the healthy future for all

1 of us depends on it.

2           And lastly, I'd like to comment on some of the  
3 comments that were made earlier about the electrical  
4 infrastructure might be a little difficult and large. And  
5 for a State certified electrician, such as myself, and for  
6 companies I've worked for, it is seamless work for us.  
7 This is what we do, so please give us a chance to do it.

8           Thank you.

9           MR. CLARK: Hi. My name is David Clark, and I'm  
10 with International Brotherhood of Electrical Workers. I'd  
11 like to thank the Board for giving me the opportunity to  
12 speak.

13           Local 100 is in Fresno. You guys had a chance to  
14 sample our wonderful air quality down there, while you  
15 were you there. So I definitely have a vested interest in  
16 this.

17           IBEW workers spend a lot of time outside,  
18 especially during the middle parts of the day when peak  
19 ozone happens. And there -- the American Lung Association  
20 has rated Fresno 4th worst in the country for ozone  
21 pollution, and 5th worst for year-round particulate  
22 matter. So I'd like to say that I don't think the market  
23 will take care of itself. And I think that we need -- we  
24 need strong regulatory action, not only to protect our  
25 health, but also to create good green charging

1 infrastructure jobs.

2 Thank you.

3 MS. KROPKE: Good morning, Chairwoman Nichols and  
4 esteem Board members. My name is Jennifer Kropke. I have  
5 the privilege of working for -- on behalf of the  
6 International Brotherhood of Electrical Workers, and the  
7 National Electrical Contractors Association. Thank you  
8 for a thoughtful, well-researched proposal by staff.  
9 Thank you especially to Mr. Tony, Ms. Shirin, and Ms.  
10 Yachun as well as for the workshops that have been a part  
11 of this.

12 We stand in strong support of the Innovative  
13 Clean Transit Rule. This rule will create good green jobs  
14 in charging infrastructure and other clean energy  
15 technologies that will be a part of this process, such as  
16 Solar arrays, batteries, microgrids, and -- and all of  
17 these additional infrastructural upgrades that will become  
18 a part of this plan.

19 I also wanted to note it was very fortuitous that  
20 this discussion is coming on the heels of the Global  
21 Climate Action Summit, because there's been a lot of  
22 discussion about air climate, and jobs, and creating those  
23 good green jobs. Rules like this that are bold, not only  
24 benefit our air quality, they also benefit our working  
25 Californians.

1           So we continue to ask CARB to be bold in their  
2 regulatory action and vote in favor of this rule. Thank  
3 you very much.

4           MR. COLE: Hello, Chair Nichols, Board and staff.  
5 My name is Derek Cole. I'm a member of IBEW Local 302  
6 serving Contra Costa County. And I'm here to say that our  
7 membership is in support of the ICT Rule. Adopting the  
8 ICT will create millions of hours of clean energy work for  
9 our brothers and sisters seeking clean energy career  
10 opportunities. And as electrical workers we are exposed  
11 to some of the worst air quality, while we're outdoors  
12 working during the day.

13           And I'm thankful for the AC Transit is operating  
14 some zero-emission buses, but let's set regulatory  
15 standards, so that all agencies will similarly commit to a  
16 zero-emission transition. We can clear the air, create  
17 good jobs, green jobs, but we need your vote to set the  
18 regulatory standard.

19           And thank you very much for your time.

20           MR. SEGURA: Good afternoon, Board. My name is  
21 Nick Segura, business manager of IBEW 569 representing  
22 over 3,300 electrical workers in San Diego and Imperial  
23 Counties. We support the Innovative Clean Transit Rule  
24 and urge you to move forward to finalize and adopt this  
25 critical proposal. That IC2 -- the ICT rule will help

1 clean our air, create good middle class jobs, and  
2 establish California as a national leader in clean  
3 transportation.

4           In fact, IBEW 569 has already launched a  
5 electrical vehicle infrastructure training program, and  
6 IBEW electricians are building -- charging infrastructure  
7 throughout the state to support the growth of  
8 zero-emission vehicles. The ICT rule will also help  
9 accelerate this industry growth.

10           We've already seen momentum in San Diego. Our  
11 metropolitan transit system has approved a zero-emission  
12 pilot bus for six buses. And given our state's leadership  
13 on clean energy as well as San Diego's goal of 100 percent  
14 renewable goal, we see a bright for zero-emission transit  
15 buses to be powered by clean solar energy, another sector  
16 that has put thousands of IBEW electricians and  
17 apprentices to work. Another benefit of this rule relates  
18 to air quality, a concern of ours, as most of our members  
19 are -- work outside in construction. This rule will help  
20 reduce air pollution in the communities where we live and  
21 work.

22           Finally, we know we are running out of time to  
23 address the climate crisis. We support the IC2 -- ICT as  
24 another vital tool in California's toolkit to reduce  
25 harmful climate emissions from transportation. The ICT is

1 a win-win for our environment, our economy, and working  
2 families. And we speak in strong support. Thank you very  
3 much.

4 MR. NAYLOR: Chairman Nichols, members of the  
5 board, I'm Robert Naylor representing the Los Angeles  
6 County Metropolitan Transportation Authority. First, we  
7 want to thank the Board and your very professional staff  
8 for working with the transit agencies over the last three  
9 and a half years on this regulation. As Chair Nichols  
10 noted, our board last year set a 2030 goal for conversion  
11 to zero-emission buses.

12 Since that is a more aggressive schedule than the  
13 one in this regulation, we think we can work within this  
14 regulation to reach that goal. Importantly, we think the  
15 regulation as contemplated offers the flexibility to  
16 confront some serious challenges, which you've heard  
17 about. One is the range of the vehicles. We're hopeful,  
18 but they don't have the range we need yet to operate our  
19 kind of operation.

20 Second is the expense of both the charging  
21 infrastructure and the long-term fuel costs of both  
22 electricity and hydrogen. They far exceed the cost that  
23 we're currently experiencing with our current fleet.

24 Finally, the transit agencies are going to need  
25 an ongoing funding source from those sources outlined in

1 the presentation, and we urge the Board and we know the  
2 Board will continue to work in that direction.

3           Two comments in the staff presentation stood out  
4 for us as on point. On page eight it said, "Continued  
5 technology advancement and cost reductions are needed".  
6 And on page nine, the staff said, "Ensure requirements are  
7 technologically and financially feasible". To provide  
8 that kind of flexibility, we urge you to ensure that the  
9 final rule provides for benchmarking and regulatory  
10 assessments as the rule is implemented.

11           Again, Metro thanks the Board for working with  
12 all of us transit agencies, and rest assured Metro will  
13 work diligently with you to make steady progress on the  
14 transition to zero emissions.

15           Thank you.

16           MR. KHATRI: Good afternoon, Chair Nichols and  
17 Board members. This is Bhavin Khatri. I'm representing  
18 San Francisco Municipal Transportation Agency. First, I'd  
19 like to thank the staff of -- the folks that are working  
20 on this regulation. They've involved us and greatly  
21 worked with us to get it to where it is today.

22           We support the goals of the regulation that will  
23 help accelerate the adoption of zero-emission buses in  
24 transit agency, and fully support CARB's goal of reducing  
25 greenhouse gases and other emissions through

1 electrification of transit fleets.

2 SFMTA is a national leader in supporting  
3 sustainable reduced and zero-emission renewable transit  
4 vehicles. We operate the largest fleet of zero-emission  
5 coaches, running 100 percent greenhouse gas-free  
6 electricity in North America.

7 In May 2015, our Board adopted a zero-emission  
8 vehicle policy requiring us to purchase 100 percent  
9 zero-emission buses in 2025 with a goal of full  
10 electrification of fleet by 2035. This is ahead of CARB's  
11 commitment of 2040.

12 The zero-emission policy also outlined several of  
13 the innovative programs that we've done, such as green  
14 zone or battery electric bus pilot program, and our hybrid  
15 conversion program. While we're happy with the  
16 regulation, we do have two specific asks based on our  
17 unique challenges that we have at SFMTA. One of the tasks  
18 that Glen Tepke mention is the trolley buses. We think  
19 trolley buses should be counted as zero-emission buses,  
20 and should qualify for bonus credit. We're in -- we're in  
21 the middle of purchasing the largest procurement of  
22 zero-emission buses in North America with 185 40-foot  
23 trolley electric buses.

24 Our trolley buses are zero emission in a true  
25 sense, as they're powered by greenhouse gas-free

1 electricity, generated by a hydroelectric plant. The  
2 operation of trolley coaches does not produce any  
3 greenhouse gases compared to a typical battery electric  
4 bus, which may not be powered by greenhouse gas-free  
5 electricity.

6 The trolley -- the trolleys can operate without  
7 the polls on battery power alone for a limited distance,  
8 much like the short-range battery electric buses. The  
9 trolley buses are electric buses with additional overhead  
10 infrastructure technology that allows us battery -- allows  
11 the batteries to be charged while the bus is operating,  
12 which offers us an additional advantage.

13 The intent behind our request to include trolley  
14 coaches in the ZEV definition is to get recognition for  
15 our zero-emission trolley coach buses. We do not plan to  
16 use bonus credit to delay our electrification efforts. We  
17 may not, in fact, use any of the bonus credit if all  
18 transit agencies statewide collectively purchase the  
19 required number of zero-emission buses as part -- part of  
20 the way for early compliance.

21 Like I said, SFMTA has already committed to  
22 procuring battery electric buses in starting 2025. And we  
23 need this time to ensure the battery electric buses  
24 infrastructure is in place before system-wide adoption of  
25 the battery electric buses.

1 CHAIR NICHOLS: Thank you.

2 MR. KHATRI: In conclusion, I would just like to  
3 say --

4 CHAIR NICHOLS: You -- that sounds was your time  
5 being up.

6 MR. KHATRI: Oh, sorry about that.

7 Thank you. Appreciate the time.

8 CHAIR NICHOLS: Thank you. We understood the  
9 request.

10 MR. SASSEEN: Thank you Chair Nichols and members  
11 of the Board, members of the Senate and the Assembly. Tim  
12 Sasseen from Ballard Power Systems.

13 We at Ballard are highly appreciative of the hard  
14 work that CARB and other stakeholders have put in to  
15 creating this important regulation. Thank you for your  
16 continued openness to industry and for your consideration  
17 of our feedback. I would like to express Ballard's  
18 overall support for the proposed Innovative Clean Transit  
19 Rule.

20 Ballard manufacturers fuel cell stacks and  
21 modules for medium- and heavy-duty vehicles. Our fuel  
22 cell modules have been in transit buses in public service  
23 for almost 20 years and seven million miles. As such, we  
24 have gained a good deal of knowledge on integrating  
25 zero-emission technology into this demanding market

1 segment. It's precisely this demanding environment that  
2 makes transit most appropriate for scaling both grid  
3 charging and fuel cell electric powertrains.

4           However, this rule cannot be formed in isolation.  
5 Achieving SB 100's 2045 goals of carbon neutrality and a  
6 renewable grid will require more than tripling of our  
7 renewable generation in California, and doubling or more  
8 of our electrical loads on our electrical grid.

9           Economically transmitting and distributing this  
10 energy will be a monumental challenge, particularly in  
11 areas of remote generation, such as mountains and deserts,  
12 and in areas of dense usage, such as ports, urban  
13 industrial areas, and in many transit agencies.

14           The ICT rule must acknowledge that California now  
15 has two economic -- economical alternatives for zero  
16 emission's energy transmission distribution, namely the  
17 power grid, and hydrogen as a fuel. This -- the most  
18 appropriate method will be determined by use in each case.  
19 Liquid and gaseous fuels have proven their effectiveness  
20 in serving dense loads in and in transporting that energy  
21 over long distances without adding permanent  
22 infrastructure.

23           Hydrogen has proven itself to achieve this. It  
24 must be considered for the demanding needs of transit  
25 agencies. Unfortunately, many transit agencies have not

1 been exposed to fuel cell bus technologies as the  
2 economics have historically favored larger fleets to  
3 support fuel production. And only recently have buses  
4 come down to competitive levels. We therefore strongly  
5 support the recommendations of the California Hydrogen  
6 Business Council, particularly in these three areas:

7           One, requiring rollout plans to include an  
8 analysis of both fuel cell electric and battery electric  
9 alternatives and justifying the proportions of each in the  
10 procurement plans; two, require the rollout plans to  
11 include time and cost estimates for all infrastructure  
12 elements that the transit agency will be responsible for,  
13 including cost estimates for utility upgrades outside of  
14 transit -- transit administrator facilities from their  
15 load-serving entities, and; three advance the due date for  
16 the rollout plan by one year to 2021 to allow important  
17 deployments of fuel cell, electric, and battery electric  
18 buses on a common manufacturers platform to gather at  
19 least a year of data, namely those at AC Transit and  
20 Orange County Transit Authority.

21           If these comparative assessments are not made and  
22 issues such as range or major utility upgrades prevent  
23 success of the ICT when alternatives could have been  
24 achieved, California will suffer back -- setbacks, and  
25 public support for zero-emission transport goals will be

1 suffering.

2 Thank you.

3 MR. BOUWKAMP: Good afternoon, Chair Nichols and  
4 members of the Board. My name is Nico Bouwkamp. I'm with  
5 the California Fuel Cell Partnership. And I'm number 18  
6 on the list, so we have a few more to go, so I'll try to  
7 keep it concise.

8 My comments are mainly related to contextual --  
9 the contextual situation. As you may be aware, and if  
10 you're not, then I'll -- I can give you a hard copy.  
11 California Fuel Cell partnership recently released a  
12 document called the *California Fuel Cell Revolution*. It's  
13 a 2030 vision document that also talks about light-duty  
14 vehicles. But what's interesting about that is that it  
15 has the same infra -- or similar infrastructure as for the  
16 bus -- bus market. Points in there is that production is  
17 a really important part. And you've heard several people  
18 speak about that, and I'll get back to that in a moment.

19 Fuel Sell Partnership's members support both  
20 pathways, both fuel cells and battery electric, where  
21 applicable. And you've heard a few comments related to  
22 range of different vehicles -- of vehicle technology  
23 applications. Our members have over 18 years experience  
24 in California with fuel cell buses, that's transit  
25 agencies as well as those that provide the buses and the

1 infrastructure.

2 Fuel cell buses have been built in California  
3 since 2010, so that's ongoing. There are three transit  
4 agencies with growing fleets that operate fuel cell buses  
5 like any other fuel -- any other bus in their bus fleet,  
6 be it CNG or diesel.

7 And going back to those 2030 goals, keep that in  
8 mind, 2030 will show different infrastructure costs as  
9 there are now. And I heard some references to that  
10 earlier. As you may be aware, last week -- or the week  
11 before, the Hydrogen Council met in an conjunction with  
12 the Climate Summit in San Francisco. And one of the goals  
13 they shared was for 2030 to have completely decarbonized  
14 hydrogen. In other words, the hydrogen most likely 100  
15 percent renewable. And I've not heard any reference to  
16 that yet about the fuel -- on the fuel side of things, so  
17 that will contribute to the emission reductions.

18 And then one thing that's important in all of  
19 this is the sustainable businesses case. It's something  
20 that really drives all of us, and we'll probably hear more  
21 about them in years to come.

22 Thank you.

23 MR. BARRETT: Good afternoon. I'm will Barrett  
24 with the American Lung Association. I thought for my  
25 fourth appearance I would go to the other podium, so here

1 we are.

2 (Laughter.)

3 CHAIR NICHOLS: You're confusing me.

4 (Laughter.)

5 MR. BARRETT: The American Lung Association  
6 supports the proposal to adopt a zero emission bus  
7 requirement as a critical part of our clean air and  
8 climate strategies in California. The transportation  
9 sector is the leading source of criteria air pollutants  
10 and climate pollution that threatens public health,  
11 impacts asthma, and a wide range of other respiratory  
12 issues. We see this rule as a major advancement in the  
13 overall effort to achieve health protective air quality  
14 standards in our state's climate policies.

15 The transition of the transit bus sector marks an  
16 important foothold in the overall transition to zero  
17 emission heavy-duty technologies across the board that we  
18 need to see accelerate.

19 Yesterday, this Board during the LCFS discussion  
20 updated the efficiency credits for zero-emission buses in  
21 recognition of the value that these technologies bring to  
22 our air and our climate. At a recent workshop on the ZEV  
23 fleet discussion, a slide was shown by staff with the  
24 title "Zero Emission is Key to California's Future". We  
25 wholeheartedly agree with that statement. And especially

1 within the context of SB 100 and the Governor's new  
2 Executive Order on decarbonization.

3           This policy advances that clean air future that  
4 we're all trying to get to. We urge you to move forward  
5 with a clear policy that 100 percent of transit buses in  
6 California will be zero emission by 2040.

7           And finally, I just wanted to thank you for your  
8 support of moving forward with zero-emission technologies  
9 across the board as a critical public health effort.

10           Thank you very much.

11           CHAIR NICHOLS: Thank you.

12           DR. HORTON: Good morning, Madam Chair and Board.  
13 Dr. Mark Horton. I'm a pediatrician and public health  
14 professional, previous State Health Officer and Director  
15 of the California Department of Public Health.

16           Myself and 99 other physicians in public health,  
17 professionals around the state have presented a letter to  
18 you in strong support of moving it forward with ZEV bus  
19 rule.

20           You have strong support in the medical and public  
21 health communities for moving ahead on this rule. Why is  
22 this important? Well, hopefully, it will add a sense of  
23 urgency to the work that you're doing. We're not just  
24 talking about the long-term effects of climate change due  
25 to air pollution, rising sea levels, wildfires, floods,

1 droughts. We're talking about today people dying and  
2 suffering from cardiovascular and respiratory diseases  
3 across the country right here in California.

4 We hope this adds a sense of urgency to the work  
5 that you're doing and that we'll move very aggressively in  
6 implementing ZEB bus rule. Thank you very much.

7 CHAIR NICHOLS: Thank you. Good to hear from  
8 you.

9 MR. O'DEA: Morning, Chair Nichols, Board. Jimmy  
10 O'Dea, from the Union of Concerned Scientists. I really  
11 want to thank the Board and staff for the three years  
12 worth of work, getting the standard where it is today.  
13 This standard is something that the State should be really  
14 proud of, especially in the context of advancing the  
15 accessibility and experience of zero-emission vehicles to  
16 all Californians. Buses are the people's electric  
17 vehicle. These vehicles, of course, have zero tailpipe  
18 emissions, but also significantly lower lifecycle global  
19 warming emissions, 75 percent lower in the case of battery  
20 electric vehicles, and 50 percent lower in the case of  
21 fuel cell electric vehicles than diesel and natural gas.

22 And this is why the Union of Concerned  
23 Scientists, our 70,000 supporters in the state are behind  
24 this rule. And we're not the only ones. In addition to  
25 the health professionals across the State, 35 mayors have

1 submitted a letter to the Board supporting the  
2 acceleration of zero-emission buses across the state.

3 Our coalition we've worked at UCS with a  
4 coalition of labor, health, community groups the last  
5 three years in support of this rule. We submitted a  
6 letter to the Board August 30th outlining three ways we  
7 think that this rule can be strengthened. I'll just touch  
8 on one and let my colleagues address others.

9 And the one I want to touch on is the -- revising  
10 the date for when our articulated buses and shuttle buses  
11 come under the purview of this rule. Currently, it's  
12 2026. We believe that's too late, given that these two  
13 types of buses make up a third of all buses in transit  
14 agencies' fleets across the state, and given that the  
15 technology of these buses exists today. There's  
16 articulated buses, there's shuttle buses that exist.

17 And what we would propose is that two years after  
18 being certified, these two types of buses, from the  
19 Federal Transit Administration by going through that  
20 certification process, we propose that they become under  
21 the purview of this rule at that time.

22 Thanks for your consideration.

23 CHAIR NICHOLS: Thank you.

24 MS. ESSNER: Good morning, Chair Nichols, members  
25 of the Board. My name is Kristin Essner. I'm with the

1 Orange County Transportation Authority.

2 First, I just want to take a moment thank the ARB  
3 staff for all of the work they've done since the December  
4 discussion draft has been released. I do believe progress  
5 has been made since that time, but we do have some  
6 continued concerns with the regulation as it's currently  
7 proposed. We've submitted a detailed comment letter  
8 detailing where we see progress that's been made, and also  
9 where our concerns continue to lie.

10 We support CTA's comments, the California Transit  
11 Association's, which will be upcoming later in this  
12 hearing. But there are two significant concerns we wanted  
13 to highlight. One is related to funding. Most of the  
14 funding sources provided for right now in the regulation  
15 are either existing sources or they're competitive grants,  
16 or one-time appropriations by the legislature. These are  
17 not funding sources that we could depend on year to year,  
18 or we are already committing those funds to our existing  
19 transit fleet operations.

20 We would hope to see in future iterations a more  
21 detailed strategy for finding a long-term sustainable  
22 funding source for this purpose, and also a more clear  
23 definition that the competitive grants and other incentive  
24 funding that is under the control of the ARB can be  
25 accessed through the life of the regulation rather than

1 just for early action.

2 Second, we would like to see more clear  
3 benchmarks before any purchase requirement is enforced.  
4 This is particularly of concern for OCTA, because we have  
5 a very significant procurement happening before 2023 where  
6 we would have to replace about half of our fleet, which is  
7 299 buses.

8 If those buses cannot act as we need them in  
9 operations and daily services, that jeopardizes our  
10 transit services, and potentially our federal funding in  
11 the future.

12 Furthermore, OCTA has recently extended our  
13 useful life out to 18 years, which is way beyond the  
14 12-year useful life as required under federal law. But  
15 that is -- has been done in order to maximize funding for  
16 operational needs. That is absolutely paramount to OCTA  
17 going forward, and we hope the collaborate with both ARB  
18 staff and the Board as we move forward with this. Thank  
19 you for the opportunity to comment today.

20 CHAIR NICHOLS: Thank you.

21 MR. MAGAVERN: Bill Magavern with the Coalition  
22 for Clean Air in support. We already knew we had an  
23 urgent need to clean up transportation in this state. And  
24 recently we've been reminded how urgent that need is. We  
25 have we had a summer of smog. In the South Coast, 87

1 straight days exceeding the ozone standard, and similar  
2 problems in the San Joaquin Valley and around the state.

3           And we also have seen that when it comes to  
4 greenhouse gas emissions, while other sectors have been  
5 trending downward, transportation emissions are actually  
6 on the rise.

7           So we know that a really vital piece of  
8 decreasing emissions fro transportation is a healthy  
9 public transit. We need to decrease vehicle miles  
10 traveled. And that is going to require greater funding  
11 for public transit from the legislature, as well as from  
12 the federal government. And it will also require defeat  
13 of Proposition 6 on the ballot.

14           This proposal before you today is part of a suite  
15 of measures that you have taken action on or will taken  
16 action on to clean up transportation. And this one has  
17 been in the works for a long time.

18           And I think your staff have used the time well to  
19 really come up with an excellent proposal. But I do want  
20 to stress the urgency and note that the State  
21 Implementation Plan that you adopted a year and a half ago  
22 actually said that this rule would be adopted in 2017 and  
23 implemented in 2018.

24           So that's just to emphasize that we need these  
25 emission reductions as soon as possible, so we ask you to

1 finalize this and get into the implementation stage as  
2 soon as possible.

3           And as Jimmy O'Dea said, there is a range of  
4 health and environmental and labor organizations who have  
5 sent you a letter. We're asking for three amendments. He  
6 talked about one of them. I will stress the second one,  
7 which is simply to have a binding requirement that by 2040  
8 all the transit buses be converted over to zero emission.  
9 It's already clearly stated as a goal, and we're asking  
10 you just to put in the assurance that that will happen.

11           Finally, speaking for the Coalition for Clean  
12 Air, we also support and thank you for the nearer term  
13 requirements for low-NOx engines and renewable fuels,  
14 because those will deliver additional emission reductions  
15 over the next several years.

16           Thank you.

17           CHAIR NICHOLS: Thank you.

18           MR. HARRISON: Thank you, Chair Nichols and Board  
19 members. My name is Anthony Harrison, and I'm here on  
20 behalf of ChargePoint to convey our strong support of the  
21 ICT rule. ChargePoint has a motto, if it rolls, flies or  
22 flows, we want to charge it. And this role aligns with  
23 that mission, as it builds upon the successful policies  
24 that this Board has already implemented to drive adoption  
25 in the light-duty sector for zero-emission vehicles.

1           So you've already heard today from Proterra that  
2 the battery technology is ready. You've heard from  
3 Southern California Edison that the electric utilities are  
4 ready to deploy the infrastructure needed. And you've  
5 heard that from several representatives from IBEW that  
6 there is a ready and willing workforce to install an  
7 infrastructure.

8           Well, I'm here to tell you that the charging  
9 technology is also ready to support this transition to a  
10 clean transportation future.

11           ChargePoint recently celebrated one billion  
12 mile -- gas-free miles delivered, along our charging  
13 network. And we are already working with transit  
14 agencies, bus manufacturers, and electric utilities across  
15 the globe to build upon that first one billion, and  
16 increase billions more miles that are delivered through  
17 public transit buses.

18           Finally, we want to convey that the most  
19 important aspect of this rule is that it builds towards  
20 increasing access to clean transportation for all  
21 Californians. This includes Californians that rely on  
22 public transportation to get to and from where they need  
23 to go every day, who don't drive a light-duty vehicle, and  
24 need public transportation in order to move them around  
25 the state. This rule will make sure that they also have

1 access to clean and green transportation.

2 Thank you.

3 MR. SEDA: Good afternoon, Board members. My  
4 name is Edgar Seda. I am here on behalf of Smart Union  
5 sheet metal, air, rail, and transit. We are the unionized  
6 workforce building BYD zero-emission buses. We are here  
7 in support of this rule and the million of green working  
8 hours this will create for our members.

9 As a production lead, I oversee safe window  
10 installation, and I took time away from my job today for  
11 all of you guys to see how important this is to us.

12 Please support our industry, and adopt this rule.  
13 Thank you very much.

14 CHAIR NICHOLS: Thank you.

15 MR. LONERGAN: Good afternoon, Chair Nichols and  
16 members of the Board. My name is Mark Lonergan and I'm  
17 the Deputy General Manager and Chief Operating Officer for  
18 Regional Transit here in Sacramento, and I'd like to speak  
19 in support of staff's recommendations on the ICT proposal.

20 Here in Sacramento, we were one of the first  
21 transit systems in the country to move to compressed  
22 natural gas as a low emissions fuel for our transit bus  
23 fleet, moving away from diesel in the early 1990s. Today,  
24 we're on the cusp of another major shift in technology to  
25 zero-emission vehicles. We are currently working with

1 Electrify America to bring 12 full sized and three shuttle  
2 sized zero-emission buses to this region. We are also  
3 procuring and additional six shuttle-size zero-emission  
4 buses in an effort to find a functional ZEV alternative to  
5 the conventionally fueled cutaway buses that are commonly  
6 used in shuttle and paratransit services.

7           In the near future, we have about half our  
8 full-sized bus fleet up for replacement. This represents  
9 about 96 CNG buses that will be replaced by us between  
10 2020 and 2023. So major decisions on the magnitude of our  
11 ZEV conversion will be upon us quickly.

12           A conversion to a fully ZEV fleet is a bold  
13 initiative. And like bold -- all bold initiatives, it's  
14 not without risk. Our first and foremost responsibility  
15 is the provision of reliable public transportation to our  
16 many customers that rely on our service every day.  
17 However, we also believe it is time to start moving our  
18 fleet to a ZEV fleet in a deliberative and measured way,  
19 with the goal of complete fleet conversion as early as  
20 2030.

21           We believe the progress made in the development  
22 of full-size battery electric buses in recent years would  
23 serve approximately 30 percent of today's operational  
24 needs for our system. And as range improves, we fully  
25 expect the availability of vehicles that would fully meet

1 our services needs before 2030.

2           The higher price of ZEV transit vehicles are  
3 currently offset by a number of funding opportunities that  
4 are both helpful and essential in supporting the  
5 transition to zero-emission transit bus fleets. We would  
6 request that these programs be continued and made as  
7 flexible as possible into future.

8           While the trend is generally positive, there are  
9 risks and uncertainties in transitioning a large fleet to  
10 100 percent ZEV. Both range and vehicle weight remains an  
11 issue. In addition, adequate charging infrastructure for  
12 large -- a large transit fleet is a concern. Having both  
13 adequate power from our local utility and charging  
14 infrastructure to charge 250 buses over a five-hour period  
15 every night will be a challenge.

16           We also know that some of the smaller buses we  
17 use for specialty services, like microtransit or  
18 neighborhood shuttles are still very range limited. And  
19 the development of ZEVs in this market may lag behind  
20 their larger brethren. We appreciate the work that has  
21 been done by your staff in preparing the proposal  
22 presented today. We believe our concerns as a transit  
23 agency have been heard and addressed. The proposal sets a  
24 reasonable time frame to transition to ZEV -- ZEVs  
25 appropriate incentives and options to address the unknowns

1 that could delay our best efforts in transition.

2 We support the proposal and look forward to  
3 continuing to work with your staff in the future. Thank  
4 you for this opportunity to comment.

5 MR. McCAULEY: Good afternoon, Board. I'm Steven  
6 McCauley. I'm a member of SMART, the Sheet Metal Air,  
7 Rail and Transit. We're the union for BYD. I am a lead  
8 that I'm in charge of the Material Specialist Group over  
9 there.

10 I locate, and find, and distribute the  
11 zero-emission bus parts. The rule would certainly help  
12 with the clean zero emissions. We -- the reason I'm  
13 nervous, this is a personal thing to me. My wife has  
14 asthma. This is so important to me to see this come  
15 through.

16 Your vote on this would just be awesome to pass  
17 this and help us out. We're stalking green jobs, great  
18 jobs in building a clean environment.

19 That's all we need. Thank you.

20 MS. WEBER: Good afternoon, Vice Chair Berg and  
21 members of the Board. My name is Rikki Weber. And I am  
22 here on behalf of Earthjustice. Earthjustice is a public  
23 interest environmental law firm headquartered here in  
24 California, and has been working with the Advance Clean  
25 Transit Coalition, the L.A. County Electric Bus Coalition,

1 amongst other coalitions, to advance the transition to 100  
2 percent zero-emissions buses in California.

3           We are here with our partners today to support  
4 moving forward quickly on a strong, innovative Clean  
5 Transit Rule. Staff has done a great job carefully  
6 constructing a regulation that is flexible enough to allow  
7 transit agencies to function efficiently, as we transition  
8 to a zero-emissions fleet, but also guarantees the  
9 necessary transformation that health, environmental and  
10 environmental justice organizations have required.

11           Electric buses do need electric chargers. And  
12 the California Public Utilities approved one billion in  
13 funding for electric transportation infrastructure. This  
14 means utilities will be building hundreds of fast chargers  
15 and other technology across the state.

16           This rule has been many years in the making and  
17 it will provide desperately needed criteria pollutant and  
18 green gas -- greenhouse gas emissions reductions for our  
19 state to meet its pollution reduction standards.

20           As a recent -- as recent coverage in the LA Times  
21 and other outlets have noted, many parts of California  
22 suffer from the worst air quality in the nation. We fail  
23 to meet State and federal air standards for ozone and fine  
24 particulates, increasing health risks in vulnerable  
25 populations subjected to pollution daily.

1           In the San Joaquin Valley and the South Coast air  
2 basin, we suffered more than 100 ozone violation days, and  
3 we will most likely see more before the year is over. By  
4 passing the Innovative Clean Transit Rule, we can give all  
5 Californians a better opportunity for healthier living.

6           We understand the important role buses play in  
7 getting people to school, to work, and to run errands. I  
8 have lived in the Bay Area for 15 years, and have relied  
9 on buses and other forms of public transportation and my  
10 bike almost exclusively. I look forward to the day when  
11 every commuter in California shares the road with  
12 zero-emission buses.

13           Earthjustice supports the recommendations to  
14 strengthen regulations that were provided to the entire  
15 board in our comments we submitted with the health,  
16 environmental, and good jobs groups. The Innovative Clean  
17 Transit Rule should be passed quickly. Let's make  
18 Californians proud by adopting a first-of-its-kind  
19 regulation this year.

20           Thank you.

21           MS. BHOLA: Hi. Good afternoon, Board members.  
22 My name is Abhilasha Bhola, and I'm a Senior Policy  
23 Coordinator with Jobs to Move America. We're a national  
24 organization that's partnered with several international  
25 unions in the AFL-CIO. In Los Angeles, we have a local

1 coalition that includes faith, community, environmental  
2 and workforce development groups.

3           Firstly, we'd like to thank the Board for its  
4 leadership on pushing for a strong innovative clean  
5 transit rule, and continuing to show leadership on meeting  
6 the specific needs of low-income communities and  
7 communities of color. We'd also like to thank the staff  
8 for using BYD's community benefits agreement with Jobs to  
9 Move America as an agreement of a -- as an example of a  
10 high road electric bus manufacturer committed to creating  
11 jobs for disadvantaged communities.

12           This rule is a critical step in improving air  
13 quality for our state and maximizing our tax dollars by  
14 creating good jobs for communities facing significant  
15 barriers to employment. CARB can go further by  
16 encouraging transit agencies to adopt proven jobs  
17 policies, such as the U.S. Employment Plan that meet the  
18 goals of the SB 350 barrier study, such as access to good  
19 jobs, and investments in apprenticeship and  
20 pre-apprenticeship programs.

21           The U.S. Employment Plan has been used in transit  
22 agencies across the country, including in New York and  
23 Chicago and Los Angeles and incentivizes bus manufacturers  
24 to disclose how many jobs they're creating, the quality of  
25 those jobs, and how they'll invest in apprenticeship and

1 pre-apprenticeship programs.

2           And, in fact, at L.A. Metro, they use the U.S.  
3 Employment Plan on the procurement of electric transit  
4 buses. And this led to the community benefits agreement  
5 with BYD, where BYD committed to hiring 40 percent of its  
6 workers from disadvantaged communities, including  
7 veterans, people coming out of incarceration, women and  
8 African Americans, as well as investing in pre-  
9 apprenticeship and apprenticeship programs to ensure that  
10 every worker can be successful on the job.

11           ARB has an unmissable opportunity to duplicate  
12 these efforts and continue to show leadership on reducing  
13 greenhouse gas emissions, investing in the clean economy,  
14 and providing economic opportunity for communities across  
15 California.

16           Thank you.

17           MR. PACHECO: Good morning. My name is Ernest  
18 Pacheco. I'm the Environmental Programs Coordinator for  
19 Communication Workers of America District 9, which  
20 represents workers in Nevada, California, and Hawaii.

21           We support the ICT goals and we appreciate the  
22 effort and degree of seriousness that the CARB staff and  
23 the Board have put in to developing these rules, and we  
24 support the recommendations for inclusion of community  
25 benefits and labor conditions like the U.S. Employment

1 Plans, that are articulated in the joint comments  
2 submitted with our allies, Jobs to Move America, Blue  
3 Green Alliance, IBEW, SMART, Sierra Club, et cetera, that  
4 were submitted this week.

5 My district, District 9, represents over 50,000  
6 Californian workers in a diverse range of industries. We  
7 have a long record of working to support policy that  
8 attempts to deal with the root causes of the current and  
9 worsening climate crisis. The most recent related  
10 climate-related campaign that we were significantly  
11 involved in was what felt like the trench warfare of the  
12 effort to pass SB 100. But we fought long to address  
13 climate change and to protect and expand the AB 32  
14 principles, and many of its legislative and regulatory  
15 children, which we consider the ICT to be one of.

16 The first campaign I personally was directed by  
17 my union to work on full time was the fight against the  
18 Prop 23 attack back in 2010 of AB 32. And in the years  
19 since, we've engaged in a dozen climate-related campaigns  
20 with our allies like the Sierra Club and Blue Green  
21 Alliance; doing things such as legislation, regulation,  
22 holding trainings on climate change for our members;  
23 supporting various policy mechanisms like community choice  
24 aggregation as a means to create new local renewable  
25 energy distributed resources, et cetera, et cetera.

1           And I'm saying all this not to pat ourselves on  
2 the back, but because through all these campaigns there  
3 was a through line -- there were a couple through lines,  
4 in what we say to our union members and to other members  
5 of the community in all these campaigns.

6           One, that good environmental and public health  
7 policy is also good for workers; two, that there needs to  
8 be a true just transition for those workers  
9 disenfranchised by our evolution out of our current  
10 destructive systems and into the sustainable ones; and  
11 three, that addressing climate change and creating good  
12 family-sustaining jobs are not incompatible, but that  
13 indeed intelligent climate policy is the main driver of a  
14 green economic engine that can create millions of high  
15 rate jobs for California and the nation.

16           We've been saying this for years. And these  
17 beliefs -- this truth is what allows us to spend the time  
18 and resources as an organization to really engage in the  
19 necessary work addressing climate crisis.

20           We are now reaching a point where the rubber hits  
21 the road. And this agency and this rule is extremely  
22 important. It's exactly the place where we are going to  
23 show whether or not California is the leader, and how we  
24 do this, and how the community and workers are considered  
25 as we move forward on climate.

1 I think it's hard to overemphasize how import --  
2 important it is to set the right precedence here on this  
3 rule to include real worker and disenfranchised community  
4 considerations in the final product.

5 So again, thank you to staff and the Board for  
6 your work on this, and please consider adopting our  
7 recommendations as submitted in our joint letter this  
8 week.

9 Thank you.

10 VICE CHAIR BERG: As our next speaker comes down,  
11 I think we're approaching the 1:00 o'clock hour, you can  
12 see that we have decided not to take a lunch break today.  
13 We're just going to go through with the testimony. And so  
14 Board members as they would like to, they'll go up and --  
15 and they can hear back there as Supervisor Gioia just tod  
16 us.

17 BOARD MEMBER GIOIA: We could -- we heard  
18 everything you said while we were having lunch. I heard  
19 the jobs presentation early, because I did hear that.

20 VICE CHAIR BERG: Also, if you haven't signed up  
21 yet, would you please sign up to speak, because we are  
22 going to close the speaker request list. And so we'll do  
23 that at 1:15. Thank you.

24 MR. TENGCO: Good afternoon. My name is JB  
25 Tengco and I'm the west coast director for the Blue Green

1 Alliance. Blue Green Alliance brings together several  
2 unions and environmental groups to look at the way we  
3 address climate change and create and maintain good jobs.  
4 Many of our members, both in the environmental side and  
5 labor side have made comments today and will comment after  
6 me.

7           We appreciate the hard work of the CARB staff and  
8 Board in creating and advancing this important rule, and  
9 we support approving this rule as soon as possible. We  
10 believe that the adoption of a strong innovative clean  
11 transit rule is critical for meeting California's  
12 greenhouse gases, and air pollution reduction goals. And  
13 we believe that this rule can also lead to high quality  
14 job opportunities for California's working families,  
15 especially when combined with intentional workforce  
16 policies.

17           According to a jobs multiplier study developed by  
18 the University of Michigan, this transition to  
19 zero-emission buses will create over 38,000 jobs, mostly  
20 in California in final assembly, component manufacturing,  
21 and other related jobs. And that does not include the  
22 thousands of jobs that will be created for the skilled and  
23 trained workforce to build out the accompanying  
24 zero-emission infrastructure that we've heard earlier  
25 today.

1           While the Innovative Clean Transit Rule has the  
2 potential to create these thousands of clean energy jobs,  
3 it is critical though that CARB continues its leadership  
4 and look to ensure that these new jobs also create careers  
5 that provide family-sustaining wages, health care, a voice  
6 for workers, and an economic opportunity for disadvantaged  
7 communities.

8           As we've heard earlier today from BYD, this is  
9 possible, but that does not mean that all other California  
10 manufacturers will follow suit. We recognize that CARB  
11 has already taken a leadership role in developing policies  
12 that deliver co-benefits for all communities, and we  
13 applaud CARB for its leadership in looking holistically at  
14 the communities ranging from air quality to good jobs. We  
15 look forward to seeing CARB continue its forward thinking  
16 as California continues in this transition.

17           Than you.

18           MR. LeFLORE: Madam Chair, members of the Board.  
19 My name is Rudy LeFlore from Sunline Transit Agency. We  
20 were about clean transit before it became cool.

21           We were -- run a hydrogen reformer and we're  
22 purchasing a hydrogen electrolyzer. So we've be producing  
23 hydrogen for a number of years. We were the recipients of  
24 the first Buy America compliant fuel cell bus in the  
25 United States. So we have been a head of policy about

1 zero emission for years prior to this activity.

2           And so one of the things we wanted to do -- we  
3 support the reg -- the new regulation -- proposed  
4 regulation, but we see a couple of opportunities that we  
5 don't want to miss on. And one has to do with the rollout  
6 plan. The rollout plan includes a requirement for  
7 training.

8           Sunline has received A grant from the FTA and  
9 we've last year convened a plenary session of stakeholders  
10 to see what the minimum requirements were for training as  
11 we embark on these zero-emission technologies.

12           We gathered that information in what we call a  
13 center of excellence, and we would like to partner with  
14 ARB in establishing a rollout -- or a rollout plan that  
15 establishes the minimum training requirements for funding  
16 and accepting zero-emission technologies.

17           It's not just because the money is available. We  
18 want the money to be used efficiently, and we believe that  
19 we have some things to share with the industry. So we  
20 would ask that the Board consider in a training session a  
21 collaboration between ARB, and Sunline, and the Center of  
22 Excellence to establish the minimum requirements for  
23 training, and make it less arbitrary than it is now, in  
24 terms of getting a Board-approved plan.

25           We also believe that the enviroscan[SIC] -- we

1 don't see the significance of that in this regulation. We  
2 understand it when it comes to funding opportunities, but  
3 don't clearly see the significance of the EnviroScreen  
4 with the rollout plan. But again, we think this is an  
5 easy thing for ARB to do to partner with Sunline on this  
6 center of excellence for training. And we implore the  
7 Board to join with us.

8 MR. MAGGAY: Good afternoon, Board members, Vice  
9 Chair Berg. My name is Kevin Maggay. I'm with SoCalGas.  
10 We strongly support emissions reductions from the transit  
11 sector, however we do have many comments and concerns with  
12 the proposal, which I couldn't possibly get through in  
13 three minutes. So we have submitted a number of comment  
14 letters, and I'll try to hit some highlights during my  
15 time.

16 While there are several demonstration projects,  
17 and a lot of people have invested into zero-emission  
18 buses, they have not yet proven to be operationally or  
19 economically feasible. It's been reported by several news  
20 outlets like the LA Times and the Albuquerque Business  
21 Journal that they have a record of poor performance.

22 Mandating technologies that aren't proven yet  
23 could have unintended consequences. Transit agencies have  
24 commented in workshops and in some of their comment  
25 letters that if they prove to not be operationally or

1 economically feasible, transit agencies will be forced to  
2 reduce service, raise fares, or both. In short, if ARB  
3 gets this wrong, then transit agencies and those that rely  
4 on transit are the ones who are going to suffer.

5 RNG and low-NOx engines are available today. RNG  
6 has the lowest carbon intensities in the LCFS. And a  
7 Southwest Research Institute study showed that in duty  
8 cycles the low-NOx -- some transit duty cycles some  
9 low-NOx en -- excuse me -- the low-NOx engine produced  
10 undetectable levels of NOx.

11 We believe that a performance-based standard with  
12 options and off-ramps should be considered, and we have  
13 proposed this in workshops and in formal letters.

14 Government code section 11346.5(d)(13) requires  
15 agencies adopting regulations to assess reasonable  
16 alternatives that quote, "Would be as effective and less  
17 burdensome to the affected private persons than the  
18 proposed action or would be more cost effective to  
19 affected private persons".

20 By not assessing a performance standard, ARB  
21 staff did not meet this requirement to assess reasonable  
22 alternatives. L.A. Metro did a study in 2015, they looked  
23 at if they turned over their entire fleet with low-NOx  
24 engines in RNG versus turning over their entire fleet with  
25 battery electric vehicles, that not only would it be

1 significantly less cost to turnover their fleet to low-NOx  
2 engines and RNG, but you would actually achieve more total  
3 emission reductions over a 40-year period. And we urge  
4 CARB staff to assess this alternative in the next round of  
5 the proposal.

6           Additionally, we want -- we wanted to point out  
7 the diesel bus provision. Under the proposed regulation,  
8 if a transit agency is replacing a diesel bus, they can  
9 replace it with the cleanest available diesel technology,  
10 which would be a 2010 engine. We think that this is an  
11 incredibly low floor for the program. We recommend that  
12 any bus, regardless of the technology, be replaced with at  
13 least a near-zero technology with -- using renewable fuel.

14           Lastly, we also recommend that we -- that the  
15 proposal delay submittal of the rollout plans. If this  
16 proposal is adopted in January, that gives them less than  
17 a year to decide which technology to go with. Really,  
18 they're to be choosing between electric and hydrogen. And  
19 in that year's time, there's very -- there's not going to  
20 be that much data to base their opinion on. And we think  
21 that hydrogen, because it doesn't have the same issues,  
22 doesn't have the weight range and downtime charging, it's  
23 that hydrogen could ultimately be the best zero-emission  
24 technology for this and other mobile applications.

25           Thank you.

1           VICE CHAIR BERG: Thank you.

2           MR. CAMPBELL: Good afternoon. Todd Campbell  
3 with Clean Energy. And thank you, Madam Vice Chair, for  
4 working through lunch. Appreciate that both from the  
5 Board and the staff.

6           Cleaner Energy today is opposed to the current  
7 proposal, but not opposed to zero-emission buses in and of  
8 themselves as we are currently an energy provider of zero  
9 tailpipe -- zero tailpipe platforms like hydrogen.

10           As you know, we serve tran -- the transit  
11 community as an energy provider, and we are true believers  
12 of their mission of mobility for people. That is the  
13 primary purpose. So the following comments are not to be  
14 obstructionist, but to encourage you to ask the tough  
15 questions and ensure that the final rule fully supports  
16 our transit agencies and achieves clean air for our  
17 communities as soon as possible.

18           First, we believe the agencies are required under  
19 Government Code section 11346.5(d)(13) to perform a full  
20 environmental analysis of alternatives to the staff's  
21 proposal. This exercise is of particular importance  
22 because so many transits have converted their facilities  
23 to run on natural gas to help clean the air at ARB's  
24 request. These properties are also able to easily adopt  
25 near zero natural gas engines that not only provide zero

1 equivalent performance on NOx emissions, deep reductions  
2 in greenhouse gas emissions that are competitive, if not  
3 better, than -- they are also be able to preside --  
4 provide a cost effective alternative that may not require  
5 such financial constrain on the state.

6           We would have liked to have seen a full  
7 environmental analysis for you to consider prior to the  
8 rule. The L.A. County Metro did a similar study with a  
9 third-party analyst, who found that the near-zero pathway  
10 was far superior for NOx and greenhouse gas emissions  
11 almost a decade earlier and far more cost effective.

12           Second, there is no formal regulatory assessment  
13 of ZEB technology with established benchmarks within the  
14 rule well in advance of 2023 that would allow for a global  
15 off-ramp for transit agencies if ZEB technologies or costs  
16 of transportation electrification does not match ARB  
17 staff's best forecast.

18           As you know, we - and I include myself in this  
19 we - didn't do such a great job at setting the 15 percent  
20 ZEB purchase requirement in 2008 for transit on the diesel  
21 pathway. We did the analysis, and collectively we got it  
22 wrong. The consequence was dirtier -- dirtier air,  
23 especially for disadvantaged communities.

24           This brings me to my third point. If ZEB  
25 strategies fall short diesel pathway properties are

1 allowed to purchase 2010 diesel buses. They only will be  
2 required to -- they will not be able -- be required to  
3 purchase near-zero emission buses unless they are  
4 commercially available for diesel.

5           So that's not -- that's -- that's a very low  
6 backstop to be able to purchase a 2010 diesel engine.  
7 Meanwhile, we have nine of the most polluted  
8 non-attainment zones under the federal ozone standard in  
9 the country. And Southern California just experienced the  
10 longest smog streak in 20 years. I strongly recommend  
11 that the backstop, at a minimum, for all non-ZEB purchases  
12 be near-zero buses that meet the most stringent low-NOx  
13 standard.

14           Finally, I want to emphasize in short Foothills  
15 and other transit agency's concern over resiliency under  
16 state-of-emergency situations. If we are subjected to an  
17 earthquake, in addition to maybe a cyber attack and  
18 someone impacts our electrical systems and we're only  
19 dependent upon electrical modes of transportation, what do  
20 we do? So the time to start thinking about that certainly  
21 is now.

22           Thank you.

23           MR. JACOBSON: Good afternoon, Madam Chair and  
24 members of the Board. My name is Dan Jacobson, the state  
25 director Environment California.

1 I'm here in strong support of the ICT Clean Bus  
2 Program. It was only two and a half weeks ago that  
3 Governor Brown signed SB 100. And I want to thank many of  
4 the people here on the dais for their strong support, both  
5 of the bill moving through the legislature, but also  
6 working with the Governor's office to make sure that that  
7 bill got signed. But just as important that day was the  
8 Executive Order that was signed ensuring that California  
9 will get to carbon neutrality by 2045.

10 Cleaning up our transportation and the carbon  
11 pollution that comes from there is going to be one of the  
12 most important things that we do, and that's why this rule  
13 is so important.

14 In a report that we've done earlier this year, we  
15 looked at the transit systems and the school bus systems  
16 and found that 95 percent of the school buses currently in  
17 this country are running on diesel. We've got to take  
18 steps to do that. And more than 60 percent of the  
19 nation's almost 70,000 buses are running on diesel, and 18  
20 percent on natural gas. Only 0.2 percent on electricity.  
21 That's why this rule is so important.

22 I want to stress three key points going forward.  
23 The first is as is already mentioned in the staff  
24 principles, we really need to make sure that we're  
25 prioritizing the disadvantaged communities.

1           Two, we should be looking to speed up the  
2 process. Many of you have seen that the City of Los  
3 Angeles working with the Chair of the ARB has already put  
4 forward a program to drastically reduce the amount of  
5 pollution that's coming from its transportation sources.  
6 We should be getting cities not just in Los Angeles, but  
7 all over the state of California to look at proposals  
8 similar to that, and to figure out - and this is the third  
9 point - ways to adopt that in. So we're not just looking  
10 at the buses, but we're looking to all of the mobile  
11 transportation forms here in the State.

12           Thank you very much for your time.

13           MS. RUSCH: Hi there. My name is Emily Rusch.  
14 I'm the Executive Director of CALPIRG, the California  
15 Public Interest Research Group. And we co-authored the  
16 report that Dan Jacobson just mentioned with Environment  
17 California, analyzing the benefits of electric buses  
18 around the country. We also co-signed the comments that  
19 were submitted by the Sierra Club and a number of other  
20 public health and environmental groups urging you to both  
21 adopt this rule and ensure -- strengthen it and accelerate  
22 it wherever possible.

23           And since I'm number 36, I will just make  
24 comments on a personal note. I live in Berkeley,  
25 California. I live two doors in from busy Ashby Avenue in

1 Berkeley, which is a heavily used bus transit route with  
2 my two kids. I actually ride my bike to downtown Oakland  
3 to work on a near daily basis often leapfrogging with the  
4 88 bus line in Alameda County transit system.

5 And I just, as of last month, started putting my  
6 kindergartner on a yellow school bus in Berkeley Unified  
7 taking him across town to elementary school and back.

8 And while I know this rule doesn't affect school  
9 buses yet, it is my great hope that the technology pushed  
10 forward by this rule will also benefit him and his younger  
11 brother as quickly as possible.

12 So thank you.

13 MR. LAWSON: Good afternoon. Thomas Lawson,  
14 California Natural Gas Vehicle Coalition. We submitted a  
15 comment letter in July, and I don't want to take up too  
16 much time.

17 I do want to highlight two points that we brought  
18 up in our comment letter to just drive home a point. One  
19 of the -- point number two deals with the proposed  
20 regulation should include some form of sunset date for the  
21 large and small agencies to phase out old diesel vehicles  
22 quickly as possible.

23 So while we're incentivizing cleaner vehicles, we  
24 should be also working on getting the dirty vehicles out  
25 of circulation.

1           And then lastly, the second point that I want to  
2 highlight is, you know, off-ramps. And we heard a little  
3 bit today about some modifications and we appreciate  
4 those. But we believe that waiver for those folks that  
5 are having a number of issues that may crop up that  
6 prevent them from meeting the regulation, there should be  
7 a technology standard there that they should meet. They  
8 should require the adoption of natural -- near-zero  
9 technology that meets the 0.02 standard. And those  
10 transit agencies should have that as a way to get the  
11 waiver.

12           And the 0.02 standard is important, because we  
13 know that there's an effort to have low-NOx engines that  
14 don't just run on one particular fuel. So we know that's  
15 coming down the pipeline.

16           Secondly -- or in closing, I want to talk a  
17 little bit about 1383. The author is here, and we  
18 appreciate his leadership on that. But just recently this  
19 year, we've had quite a few renewable natural gas projects  
20 come on line. And it's taken a few -- a little bit of  
21 time since the bill has become adopted. But those  
22 partnerships with dairies creating jobs in the Central  
23 Valley are important, and getting that RNG into the  
24 pipeline and in transportation is going to be key.

25           Thank you.

1 MR. JABLONSKI: Good afternoon, Chair Nichols as  
2 well as the rest of the Air Resources Board. Thank you  
3 for allowing us to speak today. My name is Paul  
4 Jablonski. I'm the Chief Executive Officer of the San  
5 Diego Metropolitan Transit System.

6 And I'm here today because myself and my  
7 colleagues are the ones that are ultimately going to be  
8 responsible for implementing this rule, and finding the  
9 scarce resources that we deal with every day in order to  
10 do it.

11 MTS is a system that carries over 300,000 people  
12 a day, the vast majority of which, 70 percent, are low  
13 income and transit dependent. I'm not here today to talk  
14 against zero-emission buses. As you heard this morning,  
15 our industry is electrifying. We, in San Diego, are  
16 implementing a pilot bus as we speak -- pilot buses as we  
17 seek. Our board supports zero-emission technology, and we  
18 support the 2040 target.

19 And we have long been a partner in promoting  
20 environmental -- the environmental aspects of transit.

21 In fact, you know, we were the first with CNG in  
22 California. We were the first with renewable gas in  
23 California. We were the first to operate the Cummins  
24 low-NOx engine.

25 My concern today is with the staff's assumptions

1 of what the costs of this regulation will be, because our  
2 industry professionals for the last two and a half years  
3 have been projecting much higher costs. And this  
4 regulation also assumes significant State funding that is  
5 not guaranteed.

6           If ARB staff is wrong, it is our riders, riders  
7 with few transportation choices, and riders living in our  
8 most disadvantaged communities that will suffer if we have  
9 to reduce service just to buy and operate zero-emission  
10 buses. This would obviously be extremely  
11 counterproductive.

12           We are having a free ride day on Tuesday to  
13 support ridership, increase ridership in transit. And one  
14 of the key benefits to doing that is the environmental  
15 benefit. And I have been saying in meeting after meeting  
16 before boards and cities that if you -- if you try  
17 transit, if you just ride it two times a week, then you  
18 will save one ton in greenhouse gases per vehicle every  
19 year. And that's what we should be doing is getting more  
20 people on transit, not jeopardizing the service that we  
21 diver.

22           The cost of buses, the range of buses, the cost  
23 of electricity, the cost of bringing the power to our  
24 facilities, the cost of charging infrastructure for large  
25 urban systems that are space constrained that hasn't even

1 been designed yet, are all projected out 30 years in the  
2 future to come to a conclusion that it's going to save us  
3 money.

4           If the staff believes that those assumptions are  
5 correct, then the regulation should guarantee that to us,  
6 either with benchmarks for performance that would give us  
7 relief if they're not met, or provide for the funding  
8 that's so necessary in order to do it.

9           Thank you very much.

10          CHAIR NICHOLS: Thank you.

11          MR. NUNN: Good afternoon. I'm Keith Nunn,  
12 Director of Maintenance for Golden Gate Transit. First  
13 after, I want to thank you Chair Nichols and Board members  
14 for the opportunity to comment today.

15           We appreciate ARB's work to date in moving the  
16 transit industry on a zero-emission path. In fact, our  
17 support for the work you're doing can be illustrated by  
18 our continued participation in the Zero-Emission Bay Area  
19 Fuel Cell Demonstration Project.

20           We also appreciate the movement in the past year  
21 to make the transition more doable for our agency, which  
22 includes the limited exemption for over-the-road coaches  
23 in the purchase requirement. Golden Gate Transit provides  
24 service through Sonoma, Marin, San Francisco, and Contra  
25 Costa counties. To cover this geographically diverse

1 area, our buses must have the ability to travel 400 miles  
2 on one fueling.

3           This exemption allows for a viable solution to be  
4 developed for meeting our daily operational requirements.  
5 However, we believe the Altoona testing standard should be  
6 revisited, because Altoona testing conditions oftentimes  
7 fall to reflect -- fail to reflect the wide diversity and  
8 service requirements. And we want to make sure that any  
9 zero-emission over-the-road coach we buy will not fail in  
10 meeting our customers' needs.

11           We also appreciate the requirement of a ZEB  
12 rollout plan, the optional joint zero-emission bus group,  
13 and the deferral from ZEB purchase requirements to address  
14 circumstances beyond a transit agency's control.

15           We also want to reiterate our support for the  
16 California Transit Association's recommendation and the  
17 Association's alternative, namely including a benchmarking  
18 and regulatory assessment in the actual regulation.

19           We believe that in order to implement a  
20 responsible transition to zero-emission vehicles without  
21 imposing negative impacts on service levels and ridership,  
22 a regulatory assessment for evaluating real-world  
23 performance and costs with benchmarks established at the  
24 time the rule is adopted is important, and allowing  
25 transit agencies to use incentive funding for regulatory

1 compliance because existing sources are often over  
2 subscribed.

3 Thank you for your consideration.

4 CHAIR NICHOLS: Thank you.

5 MR. SOLIS: Chair and members, Silvia Solis with  
6 Shaw/Yoder/Antwih on behalf of the Santa Cruz Metropolitan  
7 Transit District. Today, I have comments on behalf of the  
8 CEO Mr. Alex Clifford.

9 On behalf of the Santa Cruz Metropolitan Transit  
10 District, I would like to thank the Board and staff for  
11 the opportunity to participate in the development of the  
12 new Zero-Emission Bus Regulation. I would also like to  
13 thank Mr. Kitowski and his staff for changes made to the  
14 draft ICT that have been developed as a result of numerous  
15 meetings with the California Transit Association and its  
16 members.

17 I personally have participated in numerous  
18 in-person and conference call meetings with CTA and Mr.  
19 Kitowski and staff over the past 10 months. I've also  
20 uploaded comments to CARB on the draft ICT, and the  
21 revised draft ICT at least twice over this same time  
22 period.

23 I have been interested and actively engaged in  
24 this process and have endeavored to support a process that  
25 will hopefully lead to a well-written regulation. Santa

1 Cruz Metro is one of the 16 transit agencies identified in  
2 the staff presentation as having committed to  
3 zero-emission buses and supports the Governor and CARB's  
4 goal of achieving zero-emission bus fleets by 2040.

5 To that end, in 2016 and 2017, Santa Cruz Metro  
6 obtained a Federal grant for 3.8 million to purchase three  
7 zero-emission electric buses, and cobble together several  
8 grants to purchase four additional zero-emission electric  
9 buses.

10 In May 2017, seven months prior to the release of  
11 the draft ICT, the Santa Cruz Metro board adopted a goal  
12 for a fully zero-emission bus fleet by 2040. Of course,  
13 this goal is heavily influenced by metro's ability to  
14 identify funding sources for the significantly higher cost  
15 electric buses and the need for the electric bus  
16 manufacturers to develop buses with an end-of-life range  
17 of at least 300 miles on a single overnight charge.

18 While the proposed regulation is much improved, I  
19 ask for your consideration of Santa Cruz Metro's concerns  
20 relative to excluded buses, the availability of HVIP  
21 dollars, and the need for the final regulation to include  
22 a mandatory provision that the Board create a point in  
23 time in which electric bus data is collected, reviewed,  
24 and benchmarked, and which evaluate zero-emission buses  
25 against conventional buses relative to cost and

1 performance measures, including the industry's progression  
2 towards increasing bus end-of-life range.

3           In closing, this is an unfunded mandate that will  
4 require significant public resources to fund this new and  
5 evolving technology. Costly mistakes will impact the  
6 poorest of the poor, the transit dependent, in the way of  
7 service reductions and poor performing equipment. Let us  
8 all share in the goal of getting this right.

9           Thank you very much.

10           CHAIR NICHOLS: Thank you.

11           MR. SHAW: Chair and members, I'm Joshua Shaw,  
12 Executive Director of California Transit Association.  
13 You've heard from some of our members. More will be  
14 following.

15           I want to be clear, my Association's leadership  
16 supports converting California's transit bus fleet to 100  
17 percent zero emission by 2040. We are with you in that  
18 goal. How exactly we get there, the ultimate cost of the  
19 conversion, and the technology and infrastructure-related  
20 Challenges that we are experiencing today, of course, are  
21 the details that matter, and we want to work with you to  
22 get those right. They are getting better.

23           In this draft, for a fact, your staff has moved  
24 significantly closer to our position over the last six to  
25 seven months on a range of provisions that are important.

1 Just today, we saw two proposals. We support this two  
2 proposals for the 15-day notice period. We thank the  
3 staff for those.

4 This is a much better proposal today than the  
5 regulatory concept released late last year. We thank you  
6 and your staff for working with us to get us here today.

7 But, of course, this is not yet perfect in our  
8 view. It may never be, but we want to do some things to  
9 make it better. If we do not take some further  
10 improvements, transit riders who can least afford it, may  
11 still face diminished transit service and/or higher fares,  
12 because the proposed regulation and justifications in  
13 certain ways still rest on two hopeful and truly untested  
14 assumptions.

15 Of our several formal asks, I'll emphasize two  
16 here. Our letter documents some other.

17 First, we are advocating for modest changes to  
18 the proposed regulation that would guarantee that we move  
19 forward with mandated ZEB purchases at certain milestones  
20 only insofar as the cost and performance of the technology  
21 allows. That's our benchmarking and regulatory assessment  
22 proposal you've heard about.

23 Under our changes, if the cost and performance of  
24 ZEB technology hits predetermined benchmarks -- as  
25 measured during a regulatory assessment period, before an

1 upcoming purchase mandate is scheduled to go into effect,  
2 if we hit those marks, then the mandate proceeds  
3 unimpeded. However, if the benchmarks are not achieved in  
4 an assessment year, you would temporarily suspend, or  
5 maybe adjust, or amend the regulation to better reflect  
6 the then extent real-world cost and performance and their  
7 impact on our transit service and the folks who ride our  
8 service.

9           There currently is no technology performance or  
10 cost review in the regulation. Staff told you they're  
11 going to do a review we appreciate that. That's a move  
12 towards us. We think put it in the regulation. We hope  
13 you'd agree there's no downside to doing that.

14           And second, we are advocating that you rethink  
15 current Board policy which disallows the use of all the  
16 incentive funding you've heard about today to meet  
17 regulatory compliance. When those mandates come online,  
18 we asking for funding. Please put in the regulation  
19 provisions for funding regulatory compliance, not just  
20 incentivize our folks to get ahead. But when it's time  
21 for the folks who weren't there yet to do this, they must  
22 do it, give them the funding, please.

23           Remember, your staff model projects the cost of  
24 the regulations for the transit industry at a minimum of  
25 \$1.1 billion for the first 20 years. It's not till the

1 last 10 years that it starts to turn around according to  
2 the staff model.

3           You Should commit to funding the cost that come  
4 in higher than our current costs, or those your staff is  
5 currently projecting. We hope you'll provide guidance to  
6 your staff on these two critical asks that I've made  
7 today. Thank you again for your willingness to work with  
8 us. The chair mentioned it the outset. We appreciate it.

9           CHAIR NICHOLS: Thank you.

10           Having just heard from the head of the  
11 Association, I'm about to lower the boom in terms of  
12 timing here, because the number of speakers expanded. And  
13 although, everybody has something valid to contribute,  
14 we're not hearing brand new information that hasn't  
15 already been raised. So I am going to ask from now on  
16 that we set the limit at two minutes, rather than three,  
17 and appreciate all of your patience. Thank you.

18           Mr. Barnes.

19           MR. BARNES: Good afternoon, Chair Nichols and  
20 members of the Board. My name is Doran Barnes and I serve  
21 as the Executive Director of Foothill Transit. I've also  
22 had the honor as serving as the past chair of the  
23 California Transit Association, and more recently the  
24 American Public Transportation Association.

25           In the staff presentation, it was really cool to

1 see our bus up there as one of the very first slides. And  
2 as you may know, we have been one of the pioneers in this  
3 space. Foothill Transit was the first to deploy  
4 fast-charge heavy-duty buses. We have 1.6 million miles  
5 of service with those buses, and continue to push in to  
6 learn about this technology.

7 I do also want to -- you've heard this before,  
8 but I want to express my thanks to the ARB staff for  
9 leaning in, and working with us, and understanding the  
10 operational constraints that we face. That's been  
11 extremely valuable to get to this point.

12 I would reinforce the notion that looking at  
13 benchmarks is going to be very important. And from our  
14 perspective, as one of the early adopters and early  
15 pioneers, we've seen delays. We've learned things that we  
16 didn't even know that we would learn. And we're dealing  
17 with that even today.

18 We took delivery of 14 buses late last year.  
19 Those buses are still largely not in operation because of  
20 delays in the infrastructure that's required to charge  
21 those buses. Now, one could say that's a failure. I look  
22 at it as a learning opportunity, but one that has cost us  
23 much more time than what we expected. And I think as we  
24 continue to scale this technology, there are going to be  
25 other points where there may be more time, it may take

1 more resources to be able to deliver. So benchmarks and  
2 making sure that the performance is there to serve our  
3 customers is going to be critical.

4           The other thing that is going to be critical is  
5 making sure that as you look both to the rule and you look  
6 fore broadly, that the funding is there to be able to make  
7 all this happen. And that includes funding that's spread  
8 widely across operators, because each system is unique,  
9 each system will have its own obstacles to overcome. But  
10 also funding that goes deep to allow us to go through the  
11 kinds of learnings that we're facing right now where we're  
12 trying to get this technology and move it to scale.

13           The last point I'd leave you with is that as you  
14 look at all of this information, I really, really  
15 encourage you to look at the actual data that's coming out  
16 of the operators in a real-world environment. I'm often  
17 surprised about the information that isn't quite correct  
18 that we often hear. So thank you.

19           CHAIR NICHOLS: Thank you very much. Appreciate  
20 it.

21           MS. SEPULVEDA: Good afternoon. My name is Estee  
22 Sepulveda. And I'm an external affairs rep with AC  
23 Transit, which serves the 13 cities in unincorporated  
24 areas of Alameda and Contra Costa counties. I want to  
25 start by expressing our appreciation to ARB Board members

1 and staff for the significant time and attention spent on  
2 the development of the ICT Rule. We especially want to  
3 thank Mr. Corey, Mr. Kitowski, and the rest of the staff  
4 for meeting with California Transit Association and its  
5 members to take action with our concerns.

6           The proposed rule reflects considerable strides  
7 in addressing the real-world constraints faced by AC  
8 Transit and all transit operators. In 2002, AC Transit  
9 began operating a hydrogen fuel cell bus. We now have 13  
10 hydrogen fuel cell electric buses and have two hydrogen  
11 fueling stations at our East Oakland and Emeryville bus  
12 yards.

13           We will be receiving an additional 10 hydrogen  
14 fuel cell buses and five battery electric buses. And  
15 thanks to SB 1, we have tentatively awarded funds to  
16 purchase an additional 45 ZEBs.

17           I'm proud to report that last year AC Transit's  
18 Board of Directors approved a Clean Corridors Plan, which  
19 identifies disadvantaged communities like Richmond, the  
20 San Pablo corridor, and West Oakland to be prioritized for  
21 ZEBs as we acquire them.

22           AC Transit's leadership in the development of ZEB  
23 technology underscores our commitment to transitioning to  
24 100 percent ZEB. However, AC Transit continues to have  
25 some concerns with the technology, the uncertainty of the

1 scalability, and financial ability to implement this rule.

2           Sixty-five percent of AC Transit's routes are  
3 over 200 miles. We conducted a zero-emission bus study  
4 and found only 10 percent of our routes could be served by  
5 battery electric buses, while 90 percent of our routes  
6 could serve -- could be served by hydrogen fuel cell  
7 buses. Neither one was 100 percent.

8           Additionally, our average cost of gasoline is  
9 \$2.25, for diesel a \$1.85, and for hydrogen \$7.40 a  
10 kilogram. Cost of electricity is another concern of ours.

11           On behalf of AC Transit and the members of the  
12 California Transit Association, we thank you again for all  
13 of the progress and invite the members to come to our  
14 hydrogen fueling station.

15           Thank you.

16           CHAIR NICHOLS: I've been there.

17           Thank you.

18           BOARD MEMBER GIOIA: So have I. It's good to see  
19 it.

20           CHAIR NICHOLS: We could save minutes if  
21 everybody would just say --

22           BOARD MEMBER GIOIA: Or line up.

23           CHAIR NICHOLS: -- thank you for the -- yeah,  
24 that would help actually.

25           BOARD MEMBER GIOIA: Or line up. Why don't you

1 -- folks line up

2 CHAIR NICHOLS: If we could get you to come down  
3 to the podium, that would save a lot of time.

4 BOARD MEMBER GIOIA: You know what we've done at  
5 our local air district meeting, we've asked people to line  
6 up behind a po -- and just get ready to -- right, we've --  
7 that saved a lot of time.

8 CHAIR NICHOLS: Okay.

9 MR. SEDORYK: Thank you Chair and Board members.  
10 I'm Carl Sedoryk. I'm the CEO for the Monterey-Salinas  
11 Transit District in Monterey County, and Chair of the  
12 California Transit Association's Executive Committee.

13 I'm going to try to skip over things that have  
14 been repeated by others and maybe just reinforce those  
15 things that I think are critical for our Association. I  
16 do appreciate the work of the staff working with CTA, a  
17 subcommittee that I chaired, consisting of dozens of  
18 public transit operator leaders and operating officers  
19 comprising the most -- largest urban areas of the state  
20 and some of the more rural areas from the central coast,  
21 the Mojave Desert, San Diego, the San Joaquin Valley. I  
22 have been working with Jack Kitowski and his staff to  
23 improve this regulation.

24 I also want to acknowledge that you all recognize  
25 that a critical role we play in providing mobility

1 services to those people in our communities that are very  
2 low income and have no other choices, but also I want to  
3 acknowledge that only through providing a convenient and  
4 high frequency service can we get people to move out of  
5 their cars, reduce VMTs, and really see a reduction in  
6 greenhouse gas emissions from private vehicles.

7 Any type of regulation that improves -- increases  
8 our costs will require us to reduce that frequency, raise  
9 local taxes, or decrease increased fares to our  
10 passengers, perhaps having an unintended consequence on  
11 those VMTs.

12 I just want to also hammer home that our largest  
13 priorities for this regulation is that we strongly want  
14 the regulation to succeed by providing establishing cost  
15 and performance benchmarks, a rigorous performance review,  
16 and funding for regulatory compliance. We support the  
17 overall goal of 2040. It just feeds to be done  
18 thoughtfully in a way that's methodical that can be  
19 repeated around the country for everybody's best good.

20 So as we move forward to finalize the proposed  
21 regulation, we urge you to consider the testimony today,  
22 particularly with some of our own manufacturers who are  
23 questioning the cost and the range issues that are out the  
24 today.

25 Thank you.

1 CHAIR NICHOLS: We heard.

2 Thank you.

3 MS. MONTGOMERY: Good afternoon, Board Member  
4 Nichols and the Board of -- CARB Board. Thank you for  
5 letting us speak here today. Jacklyn Montgomery with the  
6 California Association for Coordinated Transportation. We  
7 are a 300-member organization of transit agencies that  
8 specialize in rural and small transit in California. I'm  
9 here to represent their concerns and talk about their  
10 comments that we have.

11 I also -- we're here to support the California  
12 Transit Association's comments, and their performance  
13 benchmarks that they brought about on the ICT.

14 And before I get started, I really want to thank  
15 you Chairwoman Nichols, and the entire Air Resources  
16 Board, and Jack, and Tony, and Yachun, and Shirin for all  
17 the time that they've taken out to make with our members,  
18 to discuss the rule, and actually hear their concerns and  
19 listen to those, and we really appreciate the time you did  
20 that.

21 With that, and also for looking at the vehicles  
22 specifications, we really, really appreciate you looking  
23 at a cutaway and seeing how different they are from the  
24 regular big buses.

25 CalAct supports the new definition of a small

1 operator that was just proposed by the CARB staff, and  
2 encourage the Board to adopt this definition that is  
3 consistent with federal and State programs. The new  
4 definitio would allow operators to maintain a continuity  
5 of services to vulnerable Californians who rely on  
6 transportation for access to education, employment,  
7 medical, and other life-sustaining services.

8           Second, we strongly support the delayed  
9 compliance for small operators adopting the rollout plans  
10 and purchase mandates. Our members are predominantly  
11 small operators, and additional time will be needed to  
12 secure funding for developing and rolling out the rollout  
13 plans.

14           In some case, operators need to locate, purchase,  
15 and -- sorry -- and find adequate space for new buildings.  
16 The later purchase mandate will benefit small operators to  
17 take advantage of lower purchase prices.

18           Third, we strongly urge the CARB Board to support  
19 the current plan to delay the time frame when agencies  
20 must replace cutaway vehicles.

21           And in the reference[SCI] of time, we also  
22 encourage you to increase HVIP funding for all meeting the  
23 mandate by all things.

24           Thank you and appreciate your time.

25           CHAIR NICHOLS: Thank you.

1 MS. FINK: Good afternoon, Chair Nichols and the  
2 Board. I'm Tiffani Fink and I'm the Chief Executive  
3 Officer of Paratransit, Inc. here in Sacramento. We're a  
4 transit agency that specializes in senior and disabled  
5 services. We, too, want to thank staff and the Board for  
6 all the work you've done on getting us to this point in  
7 the rule. We're here specifically addressing the issue of  
8 cutaway. And we appreciate the off-ramp that's, there but  
9 we again stress the need for benchmarking.

10 As we know, there's not a viable Altoona-tested  
11 vehicle in this classification. And unlike fixed route  
12 transit, ADA paratransit which is a requirement to  
13 complement every route in the State of California, we  
14 cannot deny service. So whether we want to go or not or  
15 there's a vehicle that's there, we're required to meet  
16 that demand for every hour of operation.

17 And our passengers are not only low-income,  
18 they're often going to places such as dialysis. They're  
19 going to critically important needs, which we want to get  
20 them there. So we look forward to continuing to work with  
21 you to ensure that we can meet that.

22 But as we meet those challenges, if those  
23 benchmarks aren't met, that we're able to enter into a  
24 discussion on how to make sure that our fleet meets the  
25 needs. It's especially important in the more rural areas,

1 places such as Lake County and the fires, cutaways  
2 overwhelmingly are used in emergency response to move  
3 people who cannot evacuate on their own, and we want to  
4 make sure this is taken into consideration.

5 Thank you.

6 CHAIR NICHOLS: Thank you.

7 MR. WILSON: Good afternoon, Board Chair and  
8 Board members, staff. Jim Wilson, Humboldt Transit  
9 Authority. Thank you for allowing us to provide comments  
10 today.

11 HTA is in favor of the ICT. We actually just  
12 took purchase of one electric bus Wednesday. So we are in  
13 the process of a project, solar project, and have a grant  
14 application out for charging systems. So hopefully that  
15 grant process goes through.

16 HTA is very rural, as some of you may know. And  
17 our -- some of our biggest concerns are funding. That's  
18 always a battle for us when we go for funding. This new  
19 electric bus purchase took us over two years to acquire.  
20 Several different funding sources.

21 The cutaways. On our intercity routes all of our  
22 routes are well over 250 to 300 miles. Just one direction  
23 is over 150 miles. So right now I don't think there's  
24 anything out there that is defined under cutaway to go  
25 that distance. We're yet to see what the true numbers

1 come out of the new bus we got. So as soon as we get it  
2 in service, we'll -- we'll know what we've got for  
3 charging and what routes it will be able to be used on.

4 The infrastructure, even though we have a fairly  
5 decent amount of property, the infrastructure for charging  
6 systems is going to be quite large for the small area we  
7 have. So our biggest concern is the funding sources, and  
8 what the bus will actually do.

9 Thank you so much.

10 CHAIR NICHOLS: Thank you.

11 MR. RAMACIER: Good afternoon, Madam Chair,  
12 members of the Board. I'm Rick Ramacier, the general  
13 manager for County Connection in Contra Costa County. And  
14 I'm also the immediate past chair of CalAct, as well as  
15 very active with the California Transit Association. I  
16 was one of the GMs that has met endlessly with Jack and  
17 his staff, I think, over -- it feels like over 100 times  
18 in the last many months.

19 And I want to appreciate the efforts that's gone  
20 into this current product by the staff. It shows a lot of  
21 thinking and a lot of listening on both sides. And  
22 overall, we -- I don't know if Jackie mentioned this, but  
23 CalAct is support of the ICT with just a couple of things  
24 we'd like to see improvement on, and those are consistent  
25 with our agencies' wishes, and that is the benchmarks.

1           We support the CTA's approach on benchmarks for  
2 the reasons you've heard. HVIP, we echo MTC and Glen  
3 Tepke's comments on HVIP in the Bay Area. It's going to  
4 be critical that we can use those HVIP funds in line with  
5 how MTC and the operators in that region replace buses.  
6 And MTC controls that process. And the federal funds in  
7 the Bay Area flow through MTC first.

8           And again, if you buy a because with an FTA  
9 dollar, you have to keep it a minimum number of years.  
10 And if you replace it early to do something else, there's  
11 huge federal penalties in that. So we'd like to see an  
12 alignment with HVIP.

13           The cutaways we are very pleased with where the  
14 staff is going with those. As you heard from Tiffani Fink  
15 and Jim Wilson, those are a specialized vehicle that often  
16 serve a very specialized population. And the longer we  
17 wait to start those vehicles, the better we'll do it. If  
18 we do it early, the stakes are going to be made most  
19 likely that will be harmful to the very population they're  
20 trying to serve.

21           And finally, I would just like to thank the  
22 staff's proposal on the definition of a small operator  
23 that showed up in the slides today. It's very consistent  
24 with how the Federal Transit Administration and even  
25 Caltrans defines what a small operator is versus a large

1 operator.

2 A different definition from CARB on who is a  
3 small operator could be confusing and actually  
4 counterproductive.

5 Thank you very much for your time.

6 CHAIR NICHOLS: Thank you.

7 MR. WIRAATMADJA: Good afternoon, Chair Nichols  
8 and members of the Board. My name is Vincent Wiraatmadja  
9 with The Weideman Group on behalf of BYD Motors. We just  
10 wanted to say thank you for the opportunity to provide  
11 comments and we would especially like to thank staff, like  
12 Tony, Yachun, an Shirin for all their work over these  
13 years, and their productive engagement with the California  
14 Transit Association.

15 As you know, BYD headquartered itself in  
16 California because of the state's forward-thinking  
17 policies on climate, like a rule like this. As a result  
18 of these policies, we've grown from 35 employees just a  
19 few years ago when I first started in this industry to  
20 more than a thousand as of today.

21 And we are committed to continuing to increase  
22 the number of green jobs in the state in partnership with  
23 our colleagues at SMART and Jobs to Move America.

24 And while BYD is supportive of the rule, we do  
25 believe that the State should continue to provide at least

1 some of the resources to make this rule successful. As  
2 stated in our letter we believe that the transit agencies  
3 should be able to continue to tap into programs like HVIP  
4 to reduce the cost of purchasing buses needed to comply  
5 with the rule.

6           Given the important role that transit agencies  
7 play in reducing vehicle miles traveled, while also  
8 serving disadvantaged communities, we must ensure that  
9 they have the resources needed to be successful in  
10 lowering greenhouse gas emissions.

11           Thank you for your time.

12           CHAIR NICHOLS: Thank you.

13           MS. JACQUES: Good afternoon Chairman Nichols and  
14 Board members. I'm Karen Jacques. I'm a member of the  
15 action team of STAR, which stands for Sacramento Transit  
16 Advocates and Riders. We advocate for policies that will  
17 increase transit use, that will reduce greenhouse gases,  
18 and that will address environmental justice issues. And  
19 we think that the ICT will go a long way toward helping  
20 our local Sacramento RT achieve the goals that Mr.  
21 Longergan talked about earlier today.

22           Also, on a personal note, I'm here in memory a  
23 friend who died of an asthma attack on one of our very bad  
24 air days. So every thing that we can do to get the  
25 benefits -- the health benefits of cleaner air is

1 important. And lastly, thank you for just being here and  
2 listening to all of us in such a long hearing.

3 CHAIR NICHOLS: Thank you.

4 MS. TUTT: Hi. Eileen Tutt with the California  
5 Electric Transportation Coalition. Thank you very much  
6 for your time today, and good afternoon. I'm here in  
7 support, wild support, for the staff's proposal. I  
8 especially want to commend the staff in trying to balance  
9 the need to increase -- increase the effectiveness and  
10 availability of transit, while also protecting our clean  
11 air and climate change goals. I think they found a very  
12 good balance, and they continue to be very open and  
13 available and work with us.

14 I do want to say we submitted comments, so please  
15 refer to our comments. I'm not going to repeat what's in  
16 there. I want to just make a reference to some of the  
17 things we've heard today about the cost associated with  
18 electricity. I will just tell you that all of the  
19 utilities are ready to serve this load, and eager to serve  
20 this load. And, in fact they're all working on rate --  
21 rate structures that will benefit transit authorities. So  
22 they are very concerned about this. They are with it.  
23 They are on top of it, and they will address these issues.

24 Electricity will continue to be one of the  
25 cheapest alternative fuels that's available. And I can

1 guarantee you that, so I don't want to -- I hope you will  
2 not buy into any of the stories about how expensive it is  
3 or how unreliable it is. It's -- I just don't -- I don't  
4 see any merit in those arguments.

5 So thank you.

6 CHAIR NICHOLS: Thank you.

7 MR. LEVIN: Chairman Nichols, members of the  
8 Board. Jaimie Levin with the Center for Transportation  
9 and the Environment. We're a non-profit that is presently  
10 managing zero emission bus procurements for over 80  
11 transit agencies. We're working on planning transition to  
12 zero-emission bus with AC Transit, San Diego MTS, soon to  
13 be with Los Angeles Metro.

14 Clearly, these -- the Innovation Clean Transit  
15 Regulation we support that. The 2040 target we think  
16 makes sense, but there are definite roadblocks related to  
17 scalability, related to funding, and related to technology  
18 readiness. You've heard about some of the advantages with  
19 fuel cell buses, as well as batter electric buses. We are  
20 recipients of funds from this board for several big  
21 projects on the fuel cell side.

22 But clearly, one of the biggest challenges is  
23 scalability. It's not enough to just provide one, two,  
24 three, five or 10 buses, but how does a transit agency  
25 manage 100, 200, 300 buses in a division. How do we fuel

1 those buses? How do we recharge those vehicles? This is  
2 the challenge that has to be addressed. And it really  
3 falls on the State legislature to work with CARB to fund  
4 pilot projects that can benchmark the success of these  
5 technologies to make them viable, and to continue the  
6 financial support by continuing HVIP funding beyond once  
7 the regulation is adopted. That is the need to help  
8 transit agencies scale up to manage their entire fleets.

9 Thank you.

10 CHAIR NICHOLS: Thank you.

11 MS. MCGHEE: Good afternoon. Lisa. San Diego  
12 Air Port Parking Company.

13 I'm highly supportive of ZEB technology. But  
14 like you've echoed from other fleet operators, there are  
15 concerns related to the readiness level. For example, the  
16 commercial scalability of sales produced in California via  
17 the HVIP mapping tools as of 8/1/2018 for the bus sector.

18 BYD has 42 sales, nine years; Lion Bus, six;  
19 Motiv Power is five; Phoenix Motors, four -- 40, Proterra  
20 is 23 and Zenith Motors 39. That's 155 buses in the HVIP  
21 program.

22 The incremental cost is real. I purchased three  
23 electric buses in 2015 at 10,000 additional incremental  
24 cost. Today, that same bus is \$60,000 more for my  
25 incremental cost.

1           The efficiency related to the vehicle and the  
2 weight of the batteries is a factor that we certainly have  
3 the ability to control, if we have benchmarks and  
4 performance standards that you can comprehend as it  
5 relates to these different gross vehicle weight vehicles  
6 as well as being loaded.

7           I challenge you to live the life of a fleet  
8 operator on August 15th on the hottest day in an electric  
9 vehicle, or maybe on Christmas week or Thanksgiving week  
10 when congestion is high. These -- we need to plan for  
11 these vehicles to be available on worst case scenarios,  
12 not on a best case day.

13           The medium-duty cutaway certainly has its  
14 challenges, like you've heard here today. So I do support  
15 the rule for leniency on that particular class vehicle.  
16 Electricity cost is very complex. It's not just about  
17 electricity of a kilowatt hour. You also have demand fees  
18 and taxes which are not advertised in your kilowatt hours.  
19 So that's not the same as miles or gallons of fuel.

20           The emissions benefits and infrastructures are  
21 certainly challenges. And learning about the power level  
22 can certainly unlock the flexibility for the range. We  
23 are limited in the range of this vehicle. And if we  
24 unlock the power level, by making it a requirement I think  
25 you can find yourself with a range increase.

1 I have one last point. May I make it?

2 CHAIR NICHOLS: Thank you. Quick. Say it.

3 MS. MCGHEE: If we also provide a rule for  
4 renewable battery storage, that can also unlock some other  
5 advantages.

6 CHAIR NICHOLS: Agreed.

7 MR. ZOBEL: Good to go. Good afternoon, Chairman  
8 Nichols, Vice Chairman Berg, members of the Board. My  
9 name is Bill Zobel I'm the vice president of Business  
10 Development and marketing for Trillium. Trillium is the  
11 alternative fuels brand for the Love's family of  
12 companies. For those that have traveled the highways and  
13 byways of the U.S., we have 450 truck stops nationwide.  
14 And Trillium is in the business of building out  
15 alternative fuel infrastructure for Love's family, in  
16 particular here in California.

17 We build out electric vehicle charging  
18 infrastructure. We build out hydrogen refueling  
19 infrastructure, and we build out renewable natural gas  
20 fueling infrastructure.

21 We're here today to support our customers, the  
22 transit industry. We are committed to building innovative  
23 infrastructure solutions needed to help this state achieve  
24 its decarbonization and clean air quality goals, including  
25 the deployment of zero and near-zero emission buses. We

1 welcome the opportunity to provide CARB technical  
2 assistance and collaboratively participate in the process,  
3 and its eventual implementation, including any potential  
4 infrastructure and technical working group that might  
5 evolve as a result of this process.

6 I'll get right to our ask. It's much like  
7 those -- that ask of the transit industry. We support  
8 their ask, which is we believe this regulation should  
9 require a review by this Board periodically to evaluate  
10 the technology and the cost to see where we're at. The  
11 fact is we don't know what we don't know.

12 Many of the assumptions that were used here is  
13 the basis for moving this rule ahead. And the industry  
14 will tell you, if it -- there are any deviations in those  
15 assumptions, it has a big impact on their operations. And  
16 you've heard that from several of our customers today, so  
17 I won't reiterate it.

18 But again, we believe a periodic performance  
19 review based on experience should be required in the  
20 context of the rule. Again, we welcome the opportunity to  
21 work with the agency and its staff and navigate the road  
22 together to our mutual end-game in mind that of clean air  
23 for all Californians.

24 Thank you.

25 CHAIR NICHOLS: Thank you.

1 MR. AHN: Good afternoon, Board members. Eddie  
2 Ahn, Executive Director of Brightline Defense, a community  
3 based organization, based in Bayview-Hunters Point --  
4 excuse me, working for Bayview-Hunters Point but based in  
5 San Francisco.

6 We've done everything from stopping Fossil fuel  
7 power plants, to promoting energy efficiency and solar for  
8 low-income communities, to more recently zero-emissions  
9 vehicles and buses. And we strongly support the proposed  
10 ICT regulation, which will spur a statewide transition to  
11 zero-emissions buses for really two reasons.

12 First, you've already heard extensively about  
13 this. It impacts not only the health of all Californians,  
14 but specifically low-income communities. Environmental  
15 Justice communities are located near one or more bus  
16 routes. And, in fact, SFMTA in San Francisco has adopted  
17 the approach of aligning green zones with particularly  
18 environmental justice communities in an effort to promote  
19 more equity.

20 And secondly is just jobs, making sure that we  
21 create clean energy jobs that are good. You've heard a  
22 number of comments today from IBEW as well, as well as  
23 Jobs to Move America, which go to this point. And co --  
24 coupled with local hire, it makes for a very powerful  
25 argument to adopt this regulation.

1           The final point is really supporting an earlier  
2 comment by MTC and SFMTA, which is really about the  
3 transition from electric vehicles -- excuse me, from  
4 trolley buses ultimately to zero-emission buses, and just  
5 making sure that there's an appropriate transition  
6 involved.

7           Already, the -- San Francisco is in a unique  
8 position. A lot of infrastructure has been invested in to  
9 make the trolley buses a success, and making sure that  
10 there's a synergy between the two. The technology is  
11 often interchangeable, as you've heard earlier, and has  
12 been provided in written comment. And there seems to be a  
13 good amount of flexibility in determining how much in  
14 bonus credits can be basically granted to SFMTA.

15           Whether it's partial credit or a timeline  
16 attached to that credit, we can all work together  
17 collaboratively between the advocates, as well as the City  
18 and County Of San Francisco to make sure that there's a  
19 successful implementation of this rule.

20           Thank you.

21           CHAIR NICHOLS: Thank you.

22           MS. KAPOOR: Good afternoon, Chair Nichols and  
23 members of the Board. Nina Kapoor of the Coalition for  
24 Renewable Natural Gas. We are a non-profit organization  
25 based in California representing all sectors of the RNG

1 industry across North America, including the organized  
2 labor, utilities, fuel producers, and fueling providers  
3 who deliver over 90 percent of the RNG participating in  
4 the LCFS today. We must disrespect -- or we must  
5 respectfully disagree --

6 (Laughter.)

7 MS. KAPOOR: -- with CARB's assertion that  
8 achieving California's long-term goals will require a  
9 transition to zero-emission technologies only in the  
10 transit sector. In fact, we believe that such a  
11 transition is not only unnecessary, but in some cases,  
12 it's not even the most efficient or effective way to  
13 achieve those goals.

14 A transition to zero-emission technologies is  
15 clearly not the most effective way to meet our climate  
16 change goals. Your own website notes that RNG is the  
17 lowest carbon intensity fuel that exists today. A transit  
18 vehicle powered by dairy RNG can achieve a carbon  
19 intensity as low as negative 272 grams per megajoule.

20 This is better than an electric transit vehicle  
21 powered by 100 percent wind or solar. Furthermore,  
22 eliminating the single largest commercial market for RNG  
23 in California will significantly impact our ability to  
24 meet the state's short-lived climate pollutant goals set  
25 forth in Senator Lara's SB 1383. This would be making a

1 huge step backward in meeting our climate change goals.

2           A transition to zero emission technologies is  
3 also not an efficient way to meet our air quality or  
4 public health goals. California's own University of  
5 California found that ultra low NOx engines powered by RNG  
6 perform at 99.8 percent clean, finding that there is no  
7 statistically significant difference with respect to air  
8 quality and public health outcomes between a zero-emission  
9 vehicle and ultra low NOx vehicle at a fraction of the  
10 cost.

11           This eventual ban on RNG-fueled vehicles will  
12 also cause us to forego the significant local air, soil,  
13 and water quality benefits that RNG production facilities  
14 provide upstream in the quality -- in the communities  
15 where they operate. Instead, this regulation would favor  
16 electric generation that has potential to shift emissions  
17 away from the communities near transit corridors, but  
18 around the power plants that are fueling the vehicle.

19           Thank you.

20           CHAIR NICHOLS: Got it.

21           MR. SAWAYA: Chair Nichols and Board members,  
22 thank you very much for your time this afternoon. My name  
23 is David Sawaya here on behalf of PG&E. PG&E is committed  
24 to working with all of our customers to help them  
25 transition to clean transportation fuels, including

1 electricity, natural and renewable natural gas, as well as  
2 hydrogen.

3 Over the past five years, we've substantially  
4 expanded our portfolio of offerings to our customers  
5 related to clean transportation. And I'd like to just  
6 highlight three of those today that are of relevance to  
7 electric transit.

8 First, in January of this year, the California  
9 Public Utilities Commission approved a transit customer  
10 demonstration for PG&E. This is a \$3 million project.  
11 We're working with San Joaquin Regional Transit to  
12 implement that. This project is aiming to help support  
13 them in expanding their current electric fleet, as well as  
14 installing behind the meter battery storage for them to  
15 help with load management with a view towards full  
16 electrification of their fleet in the 2030 time frame.

17 Secondly, in May, we received approval for a  
18 larger fleet-ready program, which provides \$236 million  
19 over five years for make-ready infrastructure for fleet  
20 customers in our service territory. This is all of the  
21 electrical infrastructure needed for electric vehicle  
22 charging, including that on the customer site, except for  
23 the actual charging station itself.

24 Fifteen percent of that program's budget is  
25 dedicated -- a minimum of 15 percent is dedicated to

1 transit agencies. And in addition for transit customers,  
2 we have a rebate on the charging station itself to support  
3 them in their move towards electrification.

4 Finally, as noted by Eileen Tutt of CalETC PG&E  
5 is taking very seriously the need to support our fleet  
6 customers and commercial electric vehicles stations with  
7 rates that are adapted to their operations. We've  
8 committed at the Public Utilities Commission to present a  
9 rate to them in the near future, and we're in the process  
10 of designing that rate.

11 The goal of that rate is to substan -- to be --  
12 provide electricity at rates that are substantially  
13 cheaper than gasoline or diesel, and structured in a way  
14 that's conducive to fleet operate -- operations.

15 Thank you very much for your time.

16 CHAIR NICHOLS: Thank you.

17 MS. DE LA CRUZ: Good afternoon, Chair Nichols,  
18 members of the Board. My name is Carlo De La Cruz. I'm  
19 here today speaking as one of the members of the Los  
20 Angeles Electric Bus Coalition. Several of our members  
21 are here today, and you heard from many of them. I'll be  
22 very brief in my statements.

23 As staff already noted, 16 transit agencies have  
24 already committed to transitioning to zero-emission buses,  
25 including seven small transit agencies across the state

1 from Humboldt to Union City, from San Joaquin to the  
2 Antelope Valley.

3           These -- and these transit agencies make up about  
4 50 percent of the buses. Our number said 40 percent, but  
5 your staff said 50, so I'll take 50.

6           Each of these agencies came to their decision  
7 after due consideration for how zero-emission buses would  
8 affect service, performance, cost consideration, and their  
9 ability to provide the core service, which is affordable  
10 mobility for the great public.

11           And ultimately, all these 16 agencies made their  
12 own decisions about how this would affect. And I think we  
13 should not only respect their autonomy, but recognize that  
14 all these -- many of these agencies have committed to a  
15 timeline of 2030 well before this rule would take effect.

16           Lastly, I want to represent one of the transit  
17 riders. As someone who has been car free for the last 13  
18 years, there is a large population that's dependent on  
19 transit. And I think, as Jimmy O'Dea already said, the  
20 bus is really the people's car. I think the people's car  
21 deserves an upgrade -- people's vehicle.

22           Thank you.

23           MR. PINGLE: Good afternoon, all. My name is Ray  
24 Pingle, and I'm the lead volunteer with Sierra Club  
25 California working on this issue. I'm going to confine my

1 remarks to today to some technical issues that support  
2 adoption of the rule.

3           The time is right for transit agencies to adopt  
4 ZEBs now for several key reasons. First, over the life of  
5 the vehicle, ZEBs will cost transit agencies less than a  
6 carbon-fueled vehicle. That is, they have a positive  
7 total cost of ownership for the transit agencies. CARB's  
8 total cost of ownership study that I participated in over  
9 18 months as part of that subcommittee will cost -- showed  
10 that in aggregate transit agencies in aggregate would save  
11 2.6 percent, or \$580 million by buying ZEBs compared with  
12 a business-as-usual case.

13           The UC Davis Institute of Transportation Studies  
14 report entitled, *Exploring the Cost of Electrification for*  
15 *California's Transit Agencies*, concluded that when HVIP  
16 and LCFS incentives are included, the cost of electrifying  
17 the entire fleet in the current period, which means now,  
18 is not statistically different from business-as-usual  
19 costs. So that's an outside independent study.

20           Second, 56 percent of daily transit routes in  
21 California are 150 miles or less. The range of electric  
22 buses has more than doubled just since it -- in the last  
23 three years as this rulemaking has been going on. And  
24 now, electric buses from the top three makers have ranges  
25 of at least 250 miles, one with more than 350 miles.

1           Third, similar to the dramatic reductions in  
2 solar costs, EV battery costs have declined 77 percent  
3 from 2010 to 2016. So again, bus ranges are continuing to  
4 increase, battery costs are continuing to decline, and  
5 battery weights are getting lighter all at the same time.

6           Finally, in just the last year, LCFS and HVIP  
7 incentives have increased significantly, and  
8 infrastructure charging costs have decreased.

9           Thank you very much. Appreciate it.

10          CHAIR NICHOLS: Thank you appreciate your  
11 testimony.

12          Kathryn.

13          MS. PHILLIPS: Hi.

14          CHAIR NICHOLS: And Ryan Kenny, if you're here,  
15 you will be our last.

16          Okay.

17          MS. PHILLIPS: Kathryn Phillips with Sierra Club  
18 California. Thank you for the opportunity to speak today  
19 and thanks for getting this rule this far. It's been a  
20 very slow process, and frankly the rule that was sort of  
21 discussed a couple of years ago was more aggressive, more  
22 assertive. It would get us to where we needed to be  
23 faster and is frankly something that I liked better.

24          But we have come to the table, we have  
25 compromised, we have worked with the staff and we have

1 worked with, and even talked to, the transit agencies  
2 around the state.

3           We have a few things that you've already heard a  
4 couple of points made about things that we would like to  
5 still see changed. But -- and I'll just focus on one of  
6 those, and that is the need to move up the date for the  
7 small transit agencies to submit plans. Right now, it's  
8 2023. We're not suggesting that they change the  
9 compliance date for small agencies, just the planning date  
10 should come sooner, while we know there are incentives.  
11 We want to get them in line to start thinking about those  
12 incentives.

13           And speaking of incentives, I do want to respond  
14 to a number of folks who keep raising the idea that  
15 compliance incentives should be allowed through and  
16 include compliance. It's not unusual for regulated  
17 entities to call for funding for compliance. However, the  
18 point of incentives is to capture early benefits for the  
19 public. And I think that's where we need to continue to  
20 focus when we think about incentives and encourage these  
21 entities to get in line soon, and use those incentives,  
22 get early adoption, and get us early reductions.

23           Thank you.

24           CHAIR NICHOLS: Thank you.

25           MR. KENNY: And I'm last. The danger of being

1 last is my testimony has pretty much already been  
2 mentioned, so I'll just make one quick point.

3 My name is Ryan Kenny with Clean Energy. We've  
4 heard obviously about all of the numerous challenges that  
5 remain to be addressed. And our position is that we do  
6 support electrification, but also there should be more  
7 than one strategy. And if the problems do persist, we do  
8 propose allowing near-zero buses, as long as they meet a  
9 0.02 NOx performance standard with renewable fuel.

10 The only point I'd like to add is that RNG buses,  
11 as far as costs go, are a \$1.122 per less -- per mile less  
12 than battery electric buses based on purchase and  
13 maintenance. This includes capital, fuel, maintenance,  
14 infrastructure and mid-life overhaul. So as cost is  
15 considered, we do ask that this be included for your  
16 deliberations.

17 Thank you.

18 CHAIR NICHOLS: Thank you.

19 Okay. That completes the testimony, and I'm  
20 going to close the record. I think everybody knows that  
21 according to our process, whatever we do today is not the  
22 end of the story. It is moving it along towards a final  
23 rule, which would then come back to the Board, we hope, as  
24 early as possible, but no later than the end of the year.

25 This has been hanging fire for a long time. And

1 I was myself a little taken aback when I was reminded by  
2 Bill Magavern that actually we are behind our own schedule  
3 in our own SIP for adopting this rule. So we can't -- we  
4 can't punt just to wait on the Theory that it might get  
5 easier.

6 It is difficult. There's no question about it.  
7 We have really, as I see it, four major constituencies  
8 that we're dealing with here, obviously, the transit  
9 agencies, but also the bus industry. The people who make  
10 buses and need to make the buses that are going to work  
11 and be attractive, and that are going to achieve our  
12 environmental goals.

13 The fuel suppliers. I don't think I've ever seen  
14 anything quite as ferocious as the first that the natural  
15 gas industry is putting up to say in the game here. But I  
16 understand why, because they think they have a really good  
17 product, and they've invested a lot in, you know, making  
18 themselves -- getting engines that are, as they say, near  
19 zero, and they see this as perhaps a life or death matter.

20 And then finally, of course, we have the people  
21 who have to breath the air, and they are at least  
22 somewhat, we hope, overlapping with the people who ride  
23 the buses, or people that we want to ride the buses  
24 anyway.

25 And we're trying to look at all of these

1 different -- different interests really and come up with  
2 the best solutions. Like a lot of people who have worked  
3 in this area, I don't -- I prefer performance mandates  
4 myself. I would like to be able to set a simple goal and  
5 then just say, you know, may the best combination win.

6 But there's a problem with that in this case,  
7 which is that we need zero. There's just no -- you know,  
8 we may need it in different ways, we may not be thinking  
9 about everything as completely and fully as we should.  
10 But the fact is, if we can't get to zero emissions out  
11 there from pretty much every part of the transportation  
12 world, we are not going to meet our air and climate goals.

13 So I think we have to set the long-term goal.  
14 There may be points along the way where we need to take a  
15 look at whether the technology is evolving as we hope it  
16 will, and be prepared to go with other alternatives. And  
17 there may be ways in which the overall alternative  
18 industry -- alternative fuels world can get itself to be  
19 truly zero, in the light of our overall goals.

20 But as of what we know today, which is what we  
21 need to act on, I really don't see any alternative but to  
22 putting a stake in the ground and saying by a date  
23 certain, in this case 2040, buses will be zero.

24 Now, the question is how can we help get there?

25 Because right now, as we have heard and seen

1 really, the transit industry isn't all that prosperous.  
2 They're not well funded. There may be ways we could --  
3 you know, they could be more efficient. But the fact is  
4 that we are, in effect, becoming their partners, and we  
5 need to be. I'm stealing some of Dan Sperling's language  
6 here. But if we aren't more deeply involved in actually  
7 helping to get more people onto these buses, and to help  
8 the agencies be more financially secure, we are not doing  
9 our job. We cannot just sit back and say, you know, you  
10 meet our goals, and then everything is going to be okay.

11 I don't have all the answers as to how that is to  
12 be done. But one thing that seems pretty obvious is that  
13 the incentives that are out there are scattered. They're  
14 not well focused. We clearly need to be working with the  
15 legislature, and we're fortunate that we have good ties  
16 with the legislature these days to come up with a better  
17 way to make sure that the funding is there to make it  
18 possible to do the kind of fleet turnover that we need to  
19 do.

20 So those are some initial thoughts, but I know  
21 people have -- people on this Board have deadlines of  
22 their own, including me, for planes that they have to  
23 catch.

24 So I just thought it would be easier if I kind  
25 of -- instead of waiting till the end, if I put some

1 thoughts out there to be begin with. And I know we have  
2 several people who want to talk, but I saw John Gioia  
3 first and then I'll turn to Ron.

4 BOARD MEMBER GIOIA: Okay. And let me say, I  
5 heartily endorse, I strongly endorse the sentiment you  
6 express, which is setting a stake in the ground, being  
7 bold, setting a goal, but also understanding how we check  
8 in along the way. Last thing we want to see are transit  
9 fares go up as a result of something like this. We all  
10 know we want to help transit. We want to support transit.  
11 We want to look at what incentive funding, even today, how  
12 do we maximizes that. So I just wanted to express that.

13 I do think thought it -- we do need to be clear  
14 about the goals we set. So I had a couple of questions  
15 and some comments on a couple of items. One is because  
16 this is helpful in understanding regions, the slide  
17 transit may comply joint -- may comply jointly and meet  
18 targets collectively in an MPO or in an air basin. Can  
19 you talk a bit about that, because there's an opportunity  
20 here, to the extent that there are agencies along the way,  
21 which some are lagging and some are doing better, but  
22 the -- but air basin or the Metropolitan Planning  
23 Organizations is achieving a collective goal.

24 So I'd like to hear -- that was an interesting  
25 idea, hear more about that for a second before making some

1 other comments.

2 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

3 Sure. Let me. This is Jack Kitowski with the  
4 Mobile Source Control Division. Let me jump in on that.

5 The concept of this actually came out of the very  
6 first transit regulation, where there were demonstration  
7 programs, and in the Bay Area, they collectively came  
8 together to advance the fuel cell technology. They did  
9 that quite effectively. We thought it worked really well.  
10 So this was a concept where we put together where transit  
11 agencies could combine together --

12 BOARD MEMBER GIOIA: Um-hmm.

13 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

14 -- and they would basically be adding their  
15 numbers together and combine -- and comply as a group.  
16 And --

17 BOARD MEMBER GIOIA: And they would do this  
18 voluntarily.

19 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

20 They would do this. It is entirely optional.  
21 They would do this voluntarily. Now, it's one of those  
22 things that we actually -- very honestly, we do need to  
23 monitor, because you will have some fleets that have been  
24 transit districts that have come here and mentioned that  
25 they will be in front of the rule.

1 BOARD MEMBER GIOIA: Right.

2 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

3 We don't want this to be abused in such a way  
4 that there are a lot of extra credits floating around.

5 BOARD MEMBER GIOIA: Right.

6 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

7 Then some people don't have to do anything.

8 BOARD MEMBER GIOIA: Right.

9 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

10 But it's an opportunity to share and learn.

11 BOARD MEMBER GIOIA: So I think this is an idea  
12 that's worth exploring more is this collective -- at least  
13 for along the way. Obviously, when we get to the 2020 --  
14 if it's a 2029 target of 100 percent all new electric  
15 buses, I mean, that's -- we would want that going forward,  
16 but possibly along the way. So I think this deserves to  
17 be fleshed out more. And I think there's some promise to  
18 that, because I think in the nature of things there will  
19 be agencies that will have an easier time and some will  
20 have a tougher time.

21 My own personal editorial remark, not really the  
22 subject of this regulation, is that there are too many  
23 transit agencies, too many small transit agencies. And  
24 there's many in the transit world who believe that if some  
25 of them -- I'm not saying all of them in a region, but if

1 some of them consolidated, we would have more  
2 efficiencies, better scheduling. But, you know, that's a  
3 separate issue for another time. But -- so spending some  
4 time on this sort of regional compliance.

5           Second, I do think as we move forward here, we  
6 need to think about how this is linked with positive  
7 worker benefit. And there was a letter presented by a  
8 coalition that included labor unions, Blue Green Alliance,  
9 CEJA, Sierra Club, Coalition for Clean Air, and others  
10 that really, I think, lays out some interesting concepts  
11 and thoughts that I would like to see the staff look at,  
12 realizing these are more policy comments, some of them in  
13 the statement reason dealing with job creation, quality of  
14 jobs.

15           I would like to see us spend some time looking at  
16 how we incorporate policies and concepts into the rule as  
17 appropriate. I don't know if staff has any initial  
18 remarks on this, but I would encourage --

19           MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

20           No, we're happy to take a look at that.

21           BOARD MEMBER GIOIA: Yeah, I would encourage that  
22 to be part of the discussion and analysis.

23           San Francisco -- oh, San Francisco raised a  
24 couple of issues that also seem to deserve some merit in  
25 addressing. One is a -- one is simpler, and it dealt with

1 the -- there's already in the proposal an opportunity  
2 for -- if a transit agency's daily mileage can't be --  
3 daily mileage needs can't be met by the existing  
4 technology, that there was -- they could defer purchase.  
5 And San Francisco, I'm sure this may apply to other  
6 agencies around the state, wanted to add the great -- a  
7 great ability requirement, because of terrain. And if --  
8 so if the tech -- if we're looking at a mileage -- a  
9 deferral for mileage reasons, it seems it's reasonable to  
10 think about the great ability requirement as well. You've  
11 seen that request. They've talked to you about that?

12 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

13 Yes. And we're happy to incorporate that. We  
14 agree with the concept.

15 BOARD MEMBER GIOIA: Yeah.

16 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

17 It's just a matter of looking at the language and  
18 getting it right.

19 BOARD MEMBER GIOIA: And then they talked about  
20 another issue. And it sounds like the Vice Chair may have  
21 some ideas too on this with regard to, you know, how do we  
22 take into consideration this issue of their having ridden  
23 those a kid in San Francisco. I was living there. The  
24 electric trolley buses, right, that -- with the overhead  
25 lines, you know, given that they're replacing a fair

1 amount of them. I'm not sure it's a one-for-one credit,  
2 but there -- what opportunities exist on at least  
3 considering that. So I'll just park that out there for --  
4 there.

5           And the -- and the other -- a couple other  
6 comments. I don't want to stack additional requirements  
7 on transit, but there was some mention of to the extent  
8 agencies implement ZEV buses, how do we also ensure,  
9 because this -- this is -- it's is going to take years for  
10 this to totally get implemented, to put some -- the  
11 zero-emission buses on lines that serve disadvantaged  
12 communities to ensure where there is already an air  
13 quality issue in a community, that they're prioritizing.  
14 I realize, you know, they're going to have enough  
15 challenges incorporating all of this, but with -- so  
16 without layering a big burden, at least how to prioritize  
17 the zero-emission buses in communities that already have  
18 air quality issues in disadvantaged communities. I think  
19 that would be, to me, an important issue to think about.

20           Finally, just more as -- well, more as a general  
21 comment, I realize a lot -- what I heard from a lot of  
22 transit agencies is concern of where the technology and  
23 cost is today. I think we fully expect technology and  
24 cost are improving dramatically, exponentially over time.

25           And so it's not -- I don't think it's fair to

1 assume that the technology or costs that exist today are  
2 what are going to exist in 10 years. And I've heard from  
3 some agencies, I think they understand that, but they're  
4 basing some of their concerns over -- over where  
5 technology exists today. And I think as our Chair pointed  
6 out, we're going to have a chance to check in on this over  
7 time to look at cost, look at technology, and ensure that  
8 this -- this is going in the right direction. It remains  
9 to be cost competitive, right?

10 In fact, the advantage of setting some  
11 requirements like this is it gets the bus companies who  
12 are here to invest, right, and ramping up research and  
13 manufacturing and technology improvements to -- so it's  
14 sort of chicken and egg thing. If we have -- if we set  
15 some specific standards, they'll know that the demand will  
16 be there, and they will make the invest -- sizeable  
17 investments they need to make to improve the technology,  
18 and continue to have the lifecycle cost of this -- of the  
19 buses to be competitive. So I think that's a factor we  
20 need to think about here.

21 And so that's why setting a requirement and a  
22 standard that's appropriate I think is important.

23 CHAIR NICHOLS: Okay. We have several people who  
24 are really anxious to get out of here, but the most  
25 anxious is Dan, and then we'll -- so Supervisor Roberts

1 has agreed to let him go first.

2 BOARD MEMBER SPERLING: So, Chair Nichols kind of  
3 set me up a little while back. This is probably the one  
4 program that I've been most troubled with my whole career  
5 here at CARB, and it comes down to the fact that we're  
6 treating, and heard this phrase, transit as a regulated  
7 party, and that just can't be.

8 These are basically local government agencies  
9 that have been starved for resources forever. They don't  
10 have much capacity of, you know, pretty much any -- of --  
11 you know, in terms of capital. The product they deliver  
12 is 80 percent subsidized. When you pay a fare, you're  
13 only paying 20 percent of the total cost. So what we're  
14 doing -- so the staff did a great job of trying to come up  
15 with some way of accommodating that. And they came up with  
16 responsive to every, which means it's a hugely complicated  
17 regulations with all kinds of, you know, accommodations,  
18 and off-ramps and -- but at the end of the day, we have --  
19 we face the risk of unintended consequences of a very  
20 serious nature, if we treat it as a regulation.

21 And there's so many uncertainties into it, before  
22 we get, you know, the electricity -- no one even talked  
23 about electricity prices. The truth is -- or there were  
24 some mentioned. Electricity prices are actually  
25 comparable or higher than the diesel, because of the

1 demand charges and how it's work -- you know, and how  
2 regulations work. And I know the utilities have talked to  
3 them. They're trying to figure out how to fix that, but  
4 that is the reality.

5           So there's all of these uncertainties. And we're  
6 dealing with agencies that are in big trouble basically.  
7 Thirty-one -- nationally, 31 out of the 34 major metro  
8 areas have lost bus ridership the last few years. And  
9 they're in the situation where it's not just a matter of  
10 worrying about cost fare increases, as someone mentioned,  
11 we're talking about an organization where we're asking  
12 them with very scarce human resources, never mind  
13 financial, to divert their attention to electric vehicles  
14 when they need to figure out their survival. And they're  
15 playing a key role in our society.

16           So, you know, what does that all mean? I really  
17 struggle with what exactly it all means, but I think one  
18 is we've got to make sure the Executive Officer has huge  
19 discretion in dealing with all of these as going along.  
20 We should stick with the -- I agree, we stick with the 24  
21 target absolutely. But how we get there, we should be  
22 really flexible, and that -- and I think part of it is if  
23 a bus operator doesn't -- there has to be money available.

24           And even if there -- the problem is when the  
25 regulation takes effect, then they can get incentive

1 money. We've got to get -- either get rid of that  
2 requirement, or waive it, or somehow not enforce it.

3 We've got to provide a lot more flexibility.  
4 These are -- many of them are very weak organizations.  
5 You know, I hate to, you know, impugn some of the transit,  
6 but it's because they've been starved for so long.

7 BOARD MEMBER GIOIA: That's why they should  
8 consolidate.

9 BOARD MEMBER SPERLING: It's a societal problem.  
10 It's a -- you know, that we've cut back our, you know,  
11 government, and resources, and how many has gone to  
12 transit.

13 So I do have to run. So I just advocate for, you  
14 know, bending over backwards, not treating them as  
15 regulate parties, treating them as partners at where we're  
16 going to help them get the money, and -- you're going to  
17 agree with me, right?

18 CHAIR NICHOLS: Yes.

19 BOARD MEMBER SPERLING: Okay. Good.

20 CHAIR NICHOLS: Ron says ditto.

21 BOARD MEMBER ROBERTS: I can't believe this. He  
22 took all my notes.

23 (Laughter.)

24 BOARD MEMBER ROBERTS: But let me -- okay.  
25 That's the last time you go first.

1 (Laughter.)

2 BOARD MEMBER ROBERTS: Let me -- I hate to say  
3 I'm in agreement with Dan, but let me --

4 (Laughter.)

5 BOARD MEMBER BALMES: Every once in a while.

6 (Laughter.)

7 BOARD MEMBER ROBERTS: Yeah. Let me embellish a  
8 little bit. First of all, his reference to, you know,  
9 predicting the future is difficult. Let me give you one  
10 example, and he high mentioned it. Many -- all the way  
11 across the country you talked about the biggest 34 transit  
12 agencies. Transit agencies all over this country of all  
13 sizes have lost ridership. What makes that unique? I  
14 don't know. I've been involved with public transit for  
15 over 30 years. I don't ever remember when the economy is  
16 going in a positive direction that this has happened.

17 Somebody may remember that, but I don't. And  
18 it -- usually, we predict our ridership based on what the  
19 economy is doing. There's something going on right now.  
20 And I just came back from a national conference in  
21 Nashville, and I learned about from some of the operators  
22 of electric buses some of their concerns. But I didn't  
23 hear anybody that has an explanation of what is affecting  
24 the industry across this whole country, where ridership is  
25 declining. You know, I don't -- maybe the scooters are

1 doing a lot better than I thought, or the -- you know, or  
2 the -- you know, the bikes or the roller skates or  
3 something. Nobody has a -- there's no clear explanation.  
4 Maybe it's Uber. Maybe it's -- you know, it -- nobody can  
5 say right now why is this happening at a time where we  
6 would have predicted just a few years ago this wouldn't  
7 happen.

8           So predicting the future that -- and the further  
9 out you try to predict it, the foggier that crystal ball  
10 gets. So -- but that is a concern. And you don't even  
11 have to look out very far. We're going to have an  
12 election in this state shortly.

13           I'm going to tell you this. SB 1 that is  
14 absolutely critical for the transit agencies, is --  
15 there's uncertainty in that. I don't want to make  
16 predictions one way or another, but I tell you there's a  
17 great deal of uncertainty in it. That goes -- there's not  
18 a transit agency in this state that's not going to feel  
19 that pretty significantly.

20           So that's a concern. And those -- see that's  
21 a -- that's not 2040. That's 2019 and 2020 we're trying  
22 to figure out. If you try to manage one of these system,  
23 you have to really deal with a whole lot of complexity.  
24 The predictions don't predict that the cost of a bus is  
25 going to decline like a computer did. If you get into

1 that game, you're dead in the water. You know why, first  
2 of all, you've got to build the bus. Forget what you're  
3 going to power it with. In the industry, they call it a  
4 glider. That's -- that's before you put the engine in.

5 There's no reason to think that basic cost of the  
6 structure is going to go down. It's like saying the cost  
7 of housing is going to go down, because we're using LEDs.  
8 Okay. It doesn't work.

9 We would be probably in good position if the cost  
10 doesn't go up too fast, rather than come down, because one  
11 of the things you're going to need is more -- more  
12 batteries to get more range. And that's going to -- the  
13 added weight and everything else, the complexity and this  
14 it's not as easy as it would appear.

15 We have to have something -- we've got to have  
16 some flexibility. I mean, we heard speaker, after  
17 speaker, after speaker saying we've got to have some kind  
18 of an off-ramp. I don't know if it has to be a hard  
19 number, but there's got to be some -- we've got to be  
20 flexible as an organization. And that would be one of my  
21 concerns, my major concern.

22 These are our partners. The transit agencies  
23 aren't our enemies. These are our partners. And I can  
24 tell you from the agency I'm involved with, we're heavily  
25 into electric. We're spending right now at \$2 billion to

1 extend one of our trolley lines. Two billion dollars.  
2 The last time I looked that was all electric.

3           And so, you know, I think -- the other thing I  
4 heard -- everybody, there's nobody against wanting to do  
5 this. 2040 is a great goal. There's no question about  
6 that. I don't -- I don't think anybody has questioned  
7 that. It's just the concerns of what happens to us on the  
8 way to that goal. We want these people to succeed. We  
9 want the ridership not to go down. We want the ridership  
10 to go up in the -- in -- so -- and there is no guarantee  
11 in terms of funding.

12           Okay. It's -- I hate to say it's the economy.  
13 It's all about the funding. You know, these are -- the  
14 buses are far more expensive. Not a little more  
15 expensive. The operations are expensive. This -- the  
16 changeover for infrastructure is expensive. And if you  
17 lived in San Diego, I'll tell you the electricity is  
18 really expensive, and plus they put a premium on top of  
19 it.

20           These are all concerns that I think a transit  
21 agency has to have.

22           I also - and I'll finish up, that I was really  
23 focused on the paratransit testimony that we heard, you  
24 know, because there aren't any paratransit units. I don't  
25 think that exists anywhere right now that are electric,

1 and especially if you're serving a rural area and you've  
2 got to go out and you've got to get somebody out in an  
3 emergency. And believe it or not that happens. And  
4 you've got to make sure they have the opportunity to have  
5 a vehicle that does that. And right now, there is --  
6 there's nothing on the horizon that I'm familiar with.

7           We just saw it back on the east coast, they sent  
8 a bunch of buses with this -- with this hurricane to get  
9 people out of there. They couldn't have done that if they  
10 had to send electric buses in, because those buses came  
11 from long distances to help out. I think it was over  
12 1,000 buses that came in.

13           In California, these are things you need to be  
14 concerned with. Yes, we -- you know, when the range gets  
15 out there at 300 miles, it becomes less of a problem.  
16 When the real range gets out there, because I know we test  
17 these things, but they don't run up and down hills and  
18 stop every few minutes and do the things that a real route  
19 costs you to do.

20           So you've got cost. You've got range. You've  
21 got infrastructure. If that doesn't suggest that we need  
22 a great deal of flexibility as we move forward on this,  
23 you know -- then, you know, we need -- we need a rude  
24 awakening.

25           CHAIR NICHOLS: Well, I think what Dan is saying

1 is we need to rethink the whole system. I mean, it's the  
2 number of agencies. It's the size of the buses. It's the  
3 way they conceptualize the business they're in. You know,  
4 it's the sunk cost that they've got. I mean, there's --  
5 it's like if you were to just -- if you could eradicate  
6 the system, which I'm not at all suggesting we would do,  
7 and start over again to try to figure out what should the  
8 public be paying for to get people from place to place and  
9 need to get from place to place, I don't think you'd  
10 design it the way it exists today.

11 BOARD MEMBER ROBERTS: Well, and I don't know --  
12 I don't know any other industry that you would either.  
13 Okay.

14 CHAIR NICHOLS: Well, I'm not advocating that  
15 Google --

16 BOARD MEMBER ROBERTS: No, I -- I agree.

17 CHAIR NICHOLS: -- be given our transit system,  
18 if they don't want to be there.

19 BOARD MEMBER ROBERTS: But I can't think of  
20 anything in this country that if you didn't -- if you had  
21 an opportunity to redesign it, you wouldn't do it, and  
22 improve it. But you've got -- you've got -- you know,  
23 you've got a history of why these things are being done,  
24 and you can't assume that those are going to be -- that's  
25 not going to change dramatically overnight and maybe even

1 long term.

2           But you've got -- here, you've -- we're talking  
3 about people that want to do the right thing, and want to  
4 be our partners. Okay. They're not arguing with us.  
5 They -- they -- they're not even saying they want to  
6 negotiate. They want you to be aware here's the problems  
7 they have to solve. And if you could figure a way that,  
8 yeah, there's federal or state funding that's going to  
9 take care of all this, I think they'd all sign up  
10 tomorrow. Not likely that's going to happen, but I think  
11 they would. So that's all I'm saying.

12           I want us to succeed on air quality. I want them  
13 to be a part of that success. And the way you're going to  
14 do that is to have some flexibility. And whether it's  
15 benchmarking -- there's got to be something that's got to  
16 happen that causes this Board to really take a look every  
17 few years at what's going on, and make whatever  
18 adjustments are needed.

19           CHAIR NICHOLS: I think -- I think everybody has  
20 heard that.

21           BOARD MEMBER ROBERTS: Okay.

22           CHAIR NICHOLS: Okay. Judy down at the end  
23 there.

24           BOARD MEMBER MITCHELL: There. It came on.

25           Okay. Yeah, some very good points have been

1 made. Certainly in the L.A. Metro area, we know that  
2 ridership has gone down, just as Ron explained, and car  
3 ownership has gone up, so -- and we also see our most  
4 underserved communities are the ones using transit. So if  
5 fares have to go up, we just haven't served the purpose.

6 But I do think that what was interesting was all  
7 our transit agencies came to the -- came to talk and were  
8 in favor of this. I mean, they recognize the obstacles in  
9 it and the problems, but they are willing partners. And  
10 so I think flexibility is the answer. They all asked for  
11 benchmarks. And I think maybe not benchmarks, but very  
12 regular periodic review of where the technology is, where  
13 the costs are, how the service and performance of the  
14 various fleets are doing, because some of them might be in  
15 mountains and so their battery demands are going to be  
16 different than somebody in -- in a flat area. We need to  
17 be paying attention to that.

18 There was suggestions about the rollout date,  
19 that they want to move it up for the smaller fleet transit  
20 agencies, and they want to move it out for the bigger  
21 ones. So somebody suggested 2021 for large fleets and  
22 earlier for the smaller fleets. I don't know what the  
23 staff thinking is on that. That might be interesting to  
24 hear where you are.

25 The other thing that has been concerning to me

1 over the past couple of months is what are we going to do  
2 with natural gas? I mean, we have huge reserves of  
3 natural gas. It's low cost, but we're moving to all  
4 electric vehicles. So how will we use natural gas?

5 I mean, one thing that Supervisor Roberts brought  
6 up was that for your emergency fleets, we need diversity  
7 in the fleet. I mean, what if your electric system goes  
8 down, and we don't have any kind of other fueling  
9 capacity? Certainly, for the fires we've had in  
10 California, the fire -- CalFire uses buses to get their  
11 firemen up there. So we need to be thinking about how  
12 the -- how we -- how we respond to emergencies.

13 The cutaway buses, I just read a short piece last  
14 week that a company called Lightning has come out with an  
15 all-electric cutaway bus. So we may see some of those in  
16 the near future that we can start using at -- for a lot --  
17 some of these smaller fleets use cutaways.

18 But I do -- I'm very pleased that we see the  
19 low-NOx option here in 2020. And I'm wondering about  
20 renewable natural gas. Yes, you have negative carbon, but  
21 you still have a -- you know, we still have a NOx and an  
22 internal combustion engine. So I think we just need to  
23 think about those things and the big picture.

24 If you can decarbonize natural gas, and then you  
25 you've got hydrogen. So -- and I know we use natural gas

1 to convert to electricity. That's our main source of  
2 electricity. But how are we going to deal with this in  
3 the big picture? I'm just starting to think about that  
4 and hope some of the rest of us are thinking about it too  
5 with abundant sources of natural gas that is inexpensive.  
6 How will we be using it?

7           And also then natural -- you know, the conversion  
8 of waste into renewable natural gas. That's part of our  
9 whole scoping plan, our plan for the state. So how do we  
10 really integrate that into some of the other things that  
11 we're doing?

12           But, for now, I think we're -- this is heading in  
13 the right direction. Our transit agencies are wanting to  
14 work with us. And so I would say, like Supervisors  
15 Roberts, we need a lot of flexibility, a lot of  
16 checkpoints along the way where we look at what is  
17 happening out there among the transit agencies, what's  
18 happening with the fueling infrastructure, and make  
19 adjustments if needed.

20           Thank you.

21           CHAIR NICHOLS: Okay. Let's hear from Diane.  
22 We're moving sides. I know everybody wants to speak, and  
23 some of us are literally about to walk out the door, so...

24           BOARD MEMBER TAKVORIAN: Okay. I'm not walking  
25 out the door quite yet. And so thank you to everybody. I

1 won't go through the list. The time is now. I feel like  
2 everyone has said it, but it's technology, it's  
3 infrastructure investments, public health, respiratory  
4 disease is critical. Climate change, we're not going to  
5 make the scoping plan our goals. Transportation emissions  
6 have increased. We really need to act now, and I think  
7 this is a perfect example of just transition.

8 I mean, nobody really wants to change. I know  
9 everyone is saying yeah, yeah, we want to do it, but  
10 there's all these obstacles in the way. But just  
11 transition is what it's about. And its never going to be  
12 easy or smooth, but it's what it's about. It's better  
13 jobs. It's cleaner air. It's more accessibility for  
14 people in environmental justice communities to get to  
15 their jobs, to get to school, to get to shopping, because  
16 this, as someone said, is the people's transportation  
17 system. So we have to make it better. And the importance  
18 of this for environmental justice and impacted communities  
19 cannot be overstated.

20 They are the primary customers. So to talk about  
21 cutting service and increasing rates for those communities  
22 is just not acceptable. So we really have to figure out  
23 how do we make this work for all the constituencies that  
24 Mary talked about, because it's critical that our  
25 communities have access. They are not the ones who are

1 reducing in ridership. They are not the ones who are  
2 getting on Uber and Lyft and all off that. And they are  
3 the ones that are the most impacted by the emissions.

4           And we can't -- I'm trying to figure out a short  
5 way to say this, but really we cannot say that we're all  
6 in favor of really moving forward with AB 617 like we did  
7 yesterday -- we spent eight hours on that, talking about  
8 how we're going to reduce emissions, and how we're going  
9 to really clean up these communities. We can't do that on  
10 one day and on the next day, say, yeah, but we're not  
11 going to do it here. We have to do it here. We have to  
12 do it in each of these decisions that come along to us  
13 as -- as we go along. Otherwise, that big decision  
14 doesn't mean anything.

15           And so this is what folks were talking about  
16 yesterday from Environmental justice communities is these  
17 are the on-the-ground decisions that we have to make. And  
18 we have to make it right for everyone, but we can't punt  
19 on something like this. I think it's really, really  
20 important.

21           So that's -- we -- I really want to work together  
22 with everyone to make this happen. And one of the key  
23 things, and I think we've said this, and Supervisor  
24 Roberts just said it as well as others, that we have to  
25 work on the electricity rates. San Diego does have super

1 high rates, and we need to figure out how we can work with  
2 CPUC to reduce those, and to really provide either the  
3 incentives, or the structure that will make it work.

4 More to say, a but I will stop there.

5 Thank you.

6 CHAIR NICHOLS: No, that's great. Thank you.

7 Hector, quick.

8 BOARD MEMBER DE LA TORRE: Two very brief  
9 comments. One, 22 years. It's quite awhile. So I think  
10 that's plenty of time for us to figure this out.

11 Number two, it came up in the comments, the  
12 school buses. We have brought this up numerous times.  
13 Can we please have an update, not today --

14 (Laughter.)

15 BOARD MEMBER DE LA TORRE: -- on where we are on  
16 the school buses and the swapping them out? We emphasized  
17 it was a priority. I want to know where we're at

18 Thank you.

19 CHAIR NICHOLS: Thank you. Yes.

20 BOARD MEMBER SHERRIFFS: Yeah. Thank you.

21 I -- all the cautions we've heard, but I have  
22 some optimism. A very different tone than the last time  
23 we were talking about transit. And much -- there is a  
24 strong sense of partnership and ownership of this. And  
25 that's huge. So things have changed. And partly, it's

1 been the responsiveness of staff. So thanks for that.

2           Some -- I echo the opportunities and concerns  
3 about low NOx. And so we need to continue to work on  
4 that. Critical for South Coast and Central Valley.

5           And unintended positive consequence of all of  
6 this that we need to remind ourselves, I think, is how  
7 this actually has driven technology not just for what we  
8 focused on, which is transit, transit buses, but clearly  
9 industry is using what they're learning to increase the  
10 opportunities in trucking. And I'm also presuming,  
11 although we didn't hear, that applications in farming must  
12 be part of this development. So unintended positive  
13 consequences. How refreshing.

14           CHAIR NICHOLS: Yeah, that's a good one.

15           BOARD MEMBER SHERRIFFS: The question about  
16 charging standards came up, and I could go on for many  
17 hours about the electronic medical record and what a  
18 disaster that has been. But one of the disasters --

19           (Laughter.)

20           BOARD MEMBER SHERRIFFS: -- has been the  
21 inability of systems to communicate. And Fresno has four  
22 hospital systems, over six community clinics, multiple  
23 IPAs. Not a single one can communicate with the other,  
24 because they are different systems. Or even if they have  
25 the same system, the systems are different, and there are

1 fire walls between them, and nobody will pay to cross the  
2 firewall.

3 So I don't know that it's -- that we have -- I  
4 don't know what we can do to encourage the manufacturers  
5 to, in fact, have one standard in terms of  
6 interoperability of these, again cause infrastructure is  
7 such an important aspect of this. We don't want the plug  
8 standing in the way of moving forward on this.

9 We're committed to 2040. So I wonder if people  
10 rollout their plans in 2019 or 2020, 2024, does it matter?  
11 How important is one -- a career one way or the other in  
12 terms of when transit agencies come up with their plans,  
13 because --

14 CHAIR NICHOLS: I think this is keyed to how long  
15 the buses last, and how long it takes to order them. I  
16 mean, it's going to be a slow transition no matter what we  
17 do, even if we said do it tomorrow.

18 BOARD MEMBER SHERRIFFS: Well, but it's  
19 understood 2040 is when, you know, there are no more  
20 internal combustion buses in transit.

21 CHAIR NICHOLS: That's not true.

22 BOARD MEMBER SHERRIFFS: Well -- buy that's --  
23 that's the goal.

24 CHAIR NICHOLS: I mean, I know, but let's just  
25 say that's -- it needs to be a very strong goal.

1 BOARD MEMBER SHERRIFFS: Yeah.

2 CHAIR NICHOLS: It needs to be a very strong  
3 goal.

4 BOARD MEMBER SHERRIFFS: We hear over and over  
5 incentives important, but my understanding, the incentives  
6 roll along. Because if you have to have 25 percent by  
7 2023, well, you've got three years, 2026, before it's got  
8 to be 50 percent. So as the regulation said, you can't  
9 use incentives, if you exceed what you have to have  
10 achieved. So I think incentives are available through  
11 this. That doesn't answer the problem, but it's a  
12 reminder that there is money ongoing to support -- support  
13 this.

14 Thank you.

15 VICE CHAIR BERG: Thank you. I'm going to be in  
16 charge of wrapping up today. And we do have one public  
17 comment person. So what I heard was 2040 -- oop, I'm  
18 sorry. I'm not quite wrapping up yet, because -- oh,  
19 thank you so much, but we're going to go to John Balmes.  
20 So sorry. Please.

21 BOARD MEMBER BALMES: Well, I don't want to -- I  
22 don't want to reiterate what other people have said. But  
23 I didn't want to put my support for trying to have some  
24 kind of credit, not necessarily one for one, for the San  
25 Francisco Muni elect trolleys. As somebody who works at

1 San Francisco General Hospital, now Zuckerberg San  
2 Francisco General, and have worked there for many years, I  
3 have to use Muni. And, you know, I think that the  
4 system -- I get to use it, yes.

5 And, you know, the system has enough problems as  
6 it is. And I think they are truly committed to clean --  
7 clean transit system. And, you know, the electric  
8 trolleys have to be replaced. They're clean. And it's a  
9 heavy lift. So I just -- I think Supervisor Gioia has  
10 already talked about this, and maybe Vice Chair Berg as  
11 well. So I just want to add my two cents in support of  
12 that.

13 VICE CHAIR BERG: Thank you.

14 Senator Florez.

15 BOARD MEMBER FLOREZ: Thank you. Just two  
16 questions of staff. First and foremost, we are talking  
17 about a goal of, is there a way to codify this, so it's  
18 not kind of best efforts, but it's actually completely  
19 codified, Jack?

20 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

21 Well -- again, this is Jack Kitowski with the  
22 Mobile Source Control Division. The regulation has a  
23 couple of aspects that lead to that. The first is the  
24 rollout plan where the transit agencies will have to have  
25 a plan on how they would get to 2040.

1           But then what the purchase requirements do is  
2 they put in place different percentages at different  
3 times.

4           BOARD MEMBER FLOREZ:   Um-hmm.

5           MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

6           What we do recognize is the -- some transit  
7 agencies hold on to their buses a little longer, and that  
8 we do have safeguards in there for people to buy  
9 combustion buses, if a zero-emission bus cannot meet their  
10 needs, and we think those are important to maintain, so as  
11 we get to the end, 2040, you know, it's not likely to  
12 be -- it may not be 100 percent.  It may be 95.  It may be  
13 97.  But the regulation will have drivers in there in  
14 terms of their percentages that will drive that to a very  
15 high number.

16           BOARD MEMBER FLOREZ:   Okay.  So maybe the answer  
17 to the question, is it -- there's no codification in this  
18 or --

19           MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:

20           The regulation does not require transit agencies  
21 to retire buses early if they still have combustion buses.

22           BOARD MEMBER FLOREZ:   Okay.  Understood.  The  
23 last question.  In terms of the small districts versus  
24 large districts, there's a two-year window.  Why?  And  
25 couldn't we just make it one window?  I'm not -- I'm not

1 saying small districts can't get up on the learning curve  
2 as much as anyone else. But I look at Porterville, for  
3 example, or some of these other places, and, you know,  
4 they -- it's a matter of will as opposed to capacity.

5 So how do you look at that in terms of the  
6 two-year window? Why is that, and does it need to be two  
7 years or could we just move it to one standard?

8 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:  
9 Senator, are we talking about the rollout plan?

10 BOARD MEMBER FLOREZ: Yeah.

11 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:  
12 So, you know, it's actually a three-year window.

13 BOARD MEMBER FLOREZ: Three-year window.

14 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:  
15 So it makes your comment even stronger.

16 BOARD MEMBER FLOREZ: Yes.

17 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:  
18 Quite honestly, there's no -- you know, there's  
19 no magic reason for the three-year time frame. I will say  
20 we visited a number of transit agencies, the smaller  
21 transit agencies, we've talked to CalAct, and these folks  
22 do amazing things on shoestring budgets.

23 BOARD MEMBER FLOREZ: Yeah.

24 MOBILE SOURCE CONTROL DIVISION CHIEF KITOWSKI:  
25 And we thought it was important to have a lag

1 time in there to recognize they -- they desperately need  
2 to learn from the large guys on how they do some of that.  
3 Three years was -- you know, was what we put in the  
4 proposal for that.

5 BOARD MEMBER FLOREZ: Okay. Thank you.

6 VICE CHAIR BERG: Thank you.

7 Assembly Member Garcia.

8 ASSEMBLY MEMBER GARCIA: Thank you. Thank you.

9 I want to just to talk a little bit. The  
10 Chairwoman talked about four different constituencies that  
11 we were trying to address concerns with. I wanted to add  
12 like a subcategory to the fourth. She talked about the  
13 public and those who depend on public transportation. And  
14 before I get into those remarks, I want to say AB 232 and  
15 SB 32, right, we think of as goals and objectives that  
16 we've set forward for greenhouse gas reductions.

17 But when you look at those legislative mandates  
18 now, there's a whole lot of other content in there that  
19 talks about ensuring that we are bringing forward  
20 co-benefits, as a result of our efforts.

21 Just two weeks ago, I got to spend some time at  
22 the Global Climate Change conference, and I spent some --  
23 a number of hours at the UC Berkeley labor studies school,  
24 where there were a number of different folks talking about  
25 how do we here in California address these -- this issue

1 of economic disparities up and down the state of  
2 California via our climate change policies?

3           And I think, you know, earlier the comments were  
4 about predicting the future and what will or will not  
5 happen. I think it's fair to say that what will happen is  
6 that there will be a displacement of a certain type of  
7 technology. And that also comes with a displacement of  
8 people and making a living, financial living, jobs, right.

9           And so one of the things that I'd like for us to  
10 really hone in on, and focus on, and it's been mentioned  
11 quite a bit here is the training aspect of this new  
12 technology. We are covering the issue of the transit  
13 agencies. We are talking about the fuels, the bus  
14 producers or manufacturers, we mentioned the public as I  
15 prefaced my comments.

16           But, you know, there has to be a strong component  
17 to this as it relates to training and developing this  
18 workforce that's going to facilitate us getting to these  
19 goals and objectives. And I think place matters.  
20 Geographic locations are extremely important when we're  
21 talking about investing in disadvantaged communities as  
22 the initial part of the rollout is how do we then -- we're  
23 talking about a mandate here, right? We're talking about  
24 somewhat of a mandate moving forward. How do we also  
25 mandate that there is a key piece to all this that's kind

1 of pushing on the workforce training and development?

2 I would like for us to move in that direction.  
3 We heard comments aligned with that. And I think ARB  
4 should be aligning its efforts there as well. Supervisor  
5 Gioia touched on that. But I think we've got to be paying  
6 more attention to that than we, I think, have put out  
7 there today in this conversation.

8 I represent a region that's got, on a bad, and  
9 I've said this before, 28 percent unemployment. On a good  
10 day, it's 18 or 19. Highest in the state of California.  
11 How can we look at them and that region and say, our  
12 climate change policies are improving California's  
13 economy, but just not in your area, right? It's an area  
14 that we're dependent on public transportation. It's an  
15 area that I think we can see kind of a dual opportunity  
16 here right, co-benefits is the word, of making sure that  
17 we're moving in the direction of cleaning up the air in  
18 that region. That also, by the way, and by no surprise  
19 probably, right? If it's highest unemployment, it  
20 probably also has a tremendous amount of environmental  
21 problems as well, and you heard that yesterday -  
22 communities adjacent to the border - as it relates to the  
23 air quality in that region.

24 So we're all on board with these objectives, but  
25 we have to really, I think, emphasize about this just

1 transition. And that's the way it was being framed at the  
2 climate change conference in these discussions, a just  
3 transition in these economically disadvantaged communities  
4 that are disproportionately impacted by continuing to push  
5 forward -- you know, just fossil fuel bus -- buses driving  
6 around these communities.

7           So I want to emphasize that. And I think that,  
8 you know, we have some transit agencies that are a perfect  
9 example, some of them are here today, some of them spoke  
10 today, and making sure that we are capitalizing on those  
11 best practices. Yes, we know who's building the buses.  
12 We know who's driving the buses, but we also have to  
13 figure out how we prepare, how we train the folks to  
14 maintain these buses, so that there's some longevity --  
15 there's some longevity to these investments that we're  
16 making.

17           Otherwise, 20 years from now we'll be talking  
18 about what the new buses look like, and the folks that  
19 drive them and the folks that make them. But what about  
20 the folks that depend on, you know, the jobs that we are  
21 actually kind of displacing as a result of the policies  
22 that we're pushing here?

23           And it's the same argument that we hear from my  
24 colleagues in the legislature who represent districts that  
25 are dependent on a fossil fuel economy. That the only

1 jobs that are available are the oil industry jobs. You  
2 know, they tell a very compelling story when, in my  
3 office, I'll have a young Chicano or Chicana who comes in  
4 who was formerly incarcerated, right, and the only  
5 opportunity that they were given to reintegrate back into  
6 the workforce was in the oil industry, right.

7           And so they're sitting there looking at me  
8 saying, hey, bother, I mean, just be mindful of the  
9 policies that you're pushing and adopting, because folks  
10 like me depend on this for a living, right?

11           And so I want to bring it back to the  
12 conversation we're having here in the context of  
13 transportation for the public and the manufacturers, and  
14 all of those other stakeholders involved that we need to  
15 really be mindful of that. And I think that we have an  
16 opportunity here to bring forward, you know, what again  
17 the just transition is referring to, and making sure that  
18 we see those co-benefits in regions of the state of  
19 California that deserve to see economic opportunities for  
20 the people that live there as well.

21           So those are my comments. I think we have some  
22 great opportunities before us. We have some great  
23 partners, once again, that are here, that are not. But I  
24 think the comments we ought to begin to look at aligning  
25 our policy direction now with making sure that those

1 investments bring forward those opportunities as well.

2 Those are my comments.

3 BOARD MEMBER GIOIA: Amen.

4 ASSEMBLY MEMBER GARCIA: Thank you for your  
5 attention.

6 BOARD MEMBER BALMES: And I also, in my rush to  
7 get us done quickly, forgot to bring this important issue  
8 up. So thank Assembly Member Garcia.

9 ASSEMBLY MEMBER GARCIA: I want to go home too,  
10 but I can't leave --

11 (Laughter.)

12 ASSEMBLY MEMBER GARCIA: -- without making sure  
13 that I make those comments.

14 BOARD MEMBER BALMES: Yes. And I thank you for  
15 those comments.

16 ASSEMBLY MEMBER GARCIA: Thank you.

17 VICE CHAIR BERG: Thank you all.

18 In wrapping up --

19 BOARD MEMBER GIOIA: I think there's two -- he  
20 wanted to say something and I wanted to make on last -- I  
21 forgot to make a comment.

22 School buses. You did say the school bus.

23 So real quick, I failed to mention if we're going  
24 to look at this, we need to look at large fleets like the  
25 Google bus fleet in the Bay Area. As in other parts of

1 the state, there are large bus fleets that are not  
2 publicly operated and they can't get off scot-free on  
3 something like this.

4 You know, where -- and so we should be maybe look  
5 at fleets above a certain size, just like we do truck  
6 rules. So I just -- I would like staff to look at that in  
7 the mix of this transit rule.

8 VICE CHAIR BERG: Thank you very much.

9 So just to remind the Board there is no voting  
10 this afternoon. We're just -- this is one of two  
11 hearings. And I would just like to wrap-up this segment  
12 with what I've heard today, 2040 is the goal. And these  
13 are our partners. And so going back and looking at a  
14 broad executive authority. What I really have heard from  
15 the group and I also like about this plan is we are going  
16 to have a rollout plan. And it should be within the  
17 Executive Officer's authority to accept that rollout plan,  
18 if it's going to meet the goal. That type of flexibility  
19 gives you an ability to have a partnership.

20 Incentive funding. Maybe we need to bring the  
21 incentive funning department -- people in Scott Rowland's  
22 group to really think about how we could look about our  
23 existing funding, as well as what additional funding we  
24 could secure, and who we need to go after to increase  
25 that. Also, there is some talk about aligning, understand

1 the federal funding. And so we could take a look at that.

2 Certainly, we've heard a lot about benchmarking.  
3 And it's the same concern that we've had in so many  
4 regulations that both Jack and Tony are so familiar with.  
5 And so looking at that technology and giving this Board a  
6 level of comfort that we won't take our eye off the ball,  
7 and how we're going to do that, I think is critical.

8 And absolutely the co-benefit plans, and how we  
9 see that all fitting together. There are training grants  
10 today for people like bus manufacturers. In fact, my  
11 company takes advantage of the employment training panel.  
12 And so getting that information out it is a great program.  
13 And so we can do things like that as well.

14 So I think if we have captured that, we'll go  
15 ahead and close this section for this agenda item.

16 And as I said, we have one public testimony  
17 and -- I'm sorry?

18 We have one person -- no, no, there's no voting  
19 today.

20 BOARD MEMBER DE LA TORRE: I want to vote.

21 (Laughter.)

22 BOARD MEMBER SHERRIFFS: We can vote. We can  
23 vote. We just press either one of these buttons.

24 VICE CHAIR BERG: Yes, that's right, and we'll  
25 record it.

1 BOARD MEMBER GIOIA: You're in a scolding mood.

2 VICE CHAIR BERG: No, no, we -- no you're voting,  
3 and very positively, but we will do that in December.  
4 We'll be coming back December, no later than January -- in  
5 January.

6 Okay. So our last point, we have three minutes,  
7 Brian for public comment and welcome.

8 (Thereupon and overhead presentation was  
9 presented as follows.)

10 MR. KOLODJI: Thank you, Vice Chair Berg.

11 Starting with a tribute to -- to the -- on the  
12 top of my slide, there's the -- its about breath we talked  
13 about earlier. And it's the breath of God that gave us  
14 life, so I give that tribute first.

15 Chair -- Vice Chair Berg and Board members, I'm  
16 grateful for you being here, especially -- I hate to say,  
17 it, but especially the legislators, because I've -- I also  
18 want to thank California Department of Food Agriculture  
19 Karen Ross, and the Commissioner of the California Energy  
20 Commission, and their staff and your staff Emily  
21 Weinberger[SIC] encouraged all -- Karen Ross and  
22 Commissioner Weisenmiller, and Emily encouraged me to be  
23 here today. So I blame it on them.

24 This technology is able to beat the Governor's  
25 recent Executive Order issued, which requires removal of

1 300 million tons of CO2 or more from the -- sending  
2 into -- from sending into the environment by 2045. But  
3 this technology actually removes it by 2025. That's two  
4 decade earlier. So I hope you'll pay attention.

5 My name is Brian Kolodji and I'm with Black Swan,  
6 a California company and the only -- and I'm presenting  
7 the only plan to accelerate and beat Governor Brown's  
8 Executive Order B-55-18 with carbon -- with, you know, a  
9 technology called carbon enrichment. The biology -- let  
10 me see if I can use this slide presentation -- how do I --  
11 okay. There we go.

12 --o0o--

13 MR. KOLODJI: The technology uses the power of  
14 breath, and biology and chemistry already well known. And  
15 it -- this technology has been vetted with again Karen  
16 Ross's CDFA Scientific Advisory Panel. And what we do is  
17 we take the emissions from the power plants and from  
18 industry and feed it directly to crops we condition it,  
19 cool it, and dilute it to where the crops actually double  
20 the growth rate and yield.

21 It's a technology that has been around for over  
22 100 years in greenhouse. And what we do is we use it to  
23 turn basically deserts into forest -- into crop land. We  
24 can -- with this technology, because we reduce the water  
25 utilization requirements of crops, and we double the

1 yield, and double the biomass. And all of this leads to  
2 biosequestration.

3 And it's been proven with pilot plants -- with,  
4 again, technology that's been around for over 100 years in  
5 greenhouses and in pilot plants in Kern County.

6 --o0o--

7 MR. KOLODJI: We're losing -- this slide here  
8 that I'm showing demonstrates how we're losing the battle.  
9 I beg to differ with Chair Nichols, she says we need to  
10 get to zero. Actually, if you look at the numbers up  
11 here, you can see that we really need to get negative.  
12 Okay. Going back to the slide, you see that 400 parts per  
13 million in the top left corner, that's what our air is  
14 today, and that's totally abnormal. It should be 300  
15 parts per million. Only in the last 100 years has it gone  
16 up to 400, and we haven't seen this in a million years.

17 So we need to -- we need to not only stop, arrest  
18 the carbon going into the environment, we need to reverse  
19 it. And there's no technology out there today, other than  
20 using biology and chemistry, which -- in crop enrichment.

21 And as you can see, we're losing the battle here,  
22 even throughout the globe. It's accelerating at 0.81.  
23 And California -- I mean, only a couple people in Europe  
24 have gone to 0.02 -- minus 0.02. China is at plus 0.63.  
25 They're absolutely going the wrong way. And --

1 CHAIR NICHOLS: Okay. Brian, so I've let you go  
2 over about a minute sorry. And I know that you've given  
3 us a lot of information here --

4 MR. KOLODJI: Can I go to the last slide?

5 CHAIR NICHOLS: Last slide.

6 MR. KOLODJI: Okay. This is the last slide  
7 showing what we need from CARB. Okay. This is -- carbon  
8 enrichment makes a profit by conditioning CO2 from stat  
9 gases and feeding to agriculture, and direct air capture  
10 also does the same.

11 Unfortunately, the CCI, the climate --  
12 California -- CARB's Climate -- California Climate  
13 Investment Program grants do not -- do not recognize these  
14 technologies. CDFA's SWEEP program, CDFA's HSP program,  
15 CEC's REAP Program don't provide any funding for these  
16 types of projects, because this innovation is -- has  
17 just -- has just been presented. And we don't get any  
18 funding. No money allowed, because it's not renewable  
19 energy. It's not efficiency. It's not ZEV, zero-emission  
20 vehicles. It's new --

21 VICE CHAIR BERG: Okay. Brian. So I really  
22 appreciate you coming, but this Board, the -- we can make  
23 no decision today as you can imagine. So this will go  
24 down to staff. I've -- I understand that you did meet  
25 with Mary Nichols earlier.

1 MR. KOLODJI: Briefly.

2 VICE CHAIR BERG: Okay. And so we will turn this  
3 back over to staff, and staff will respond. And thank you  
4 very much for coming today.

5 MR. KOLODJI: You're welcome. Thank you very  
6 much, Vice Chair Berg.

7 VICE CHAIR BERG: You're welcome.

8 Okay. That does it, and we are adjourned.

9 (Thereupon the Air Resources Board meeting  
10 adjourned at 3:11 p.m.)

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## C E R T I F I C A T E O F R E P O R T E R

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 13th day of October, 2018.



JAMES F. PETERS, CSR  
Certified Shorthand Reporter  
License No. 10063